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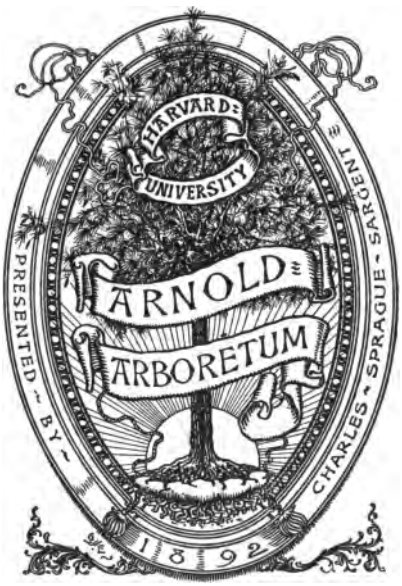
HARVARD UNIVERSITY
ARNOLD
ARBORETUM
PRESENTED BY
CHARLES SPRAGUE SARGENT
1892

THE

FLORIST, FRUITIST,

AND

GARDEN MISCELLANY.

1856.

LONDON:
28, HENRIETTA STREET, COVENT GARDEN.
MDCCCLVI.

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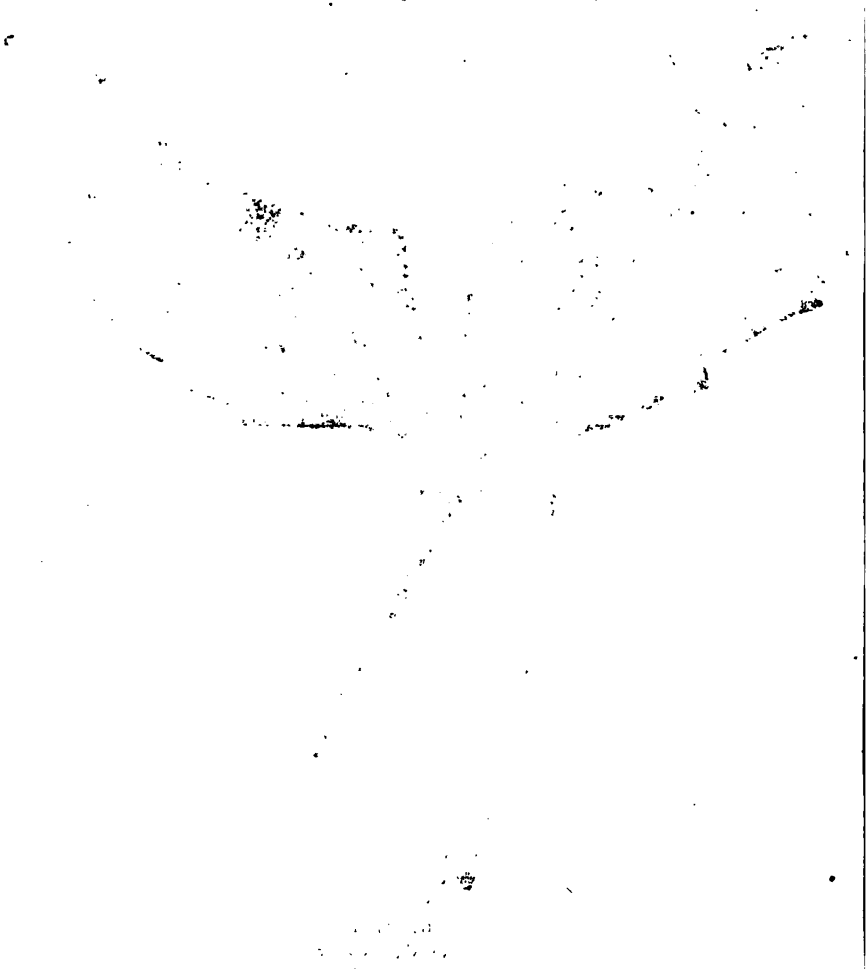
Dahlia

Bessie (Turner)

Plate 108.

Mrs Andrews Del.t & Lith.o

Printed by C. Chabot.



Dahlia.
Perfection (Keynes.
Plate 109.

Pub.d by Andrews Delick Lonco

Printed by C. Chabot.

III.

FLORIST, FRUITIST, AND GARDEN MISCELLANY.

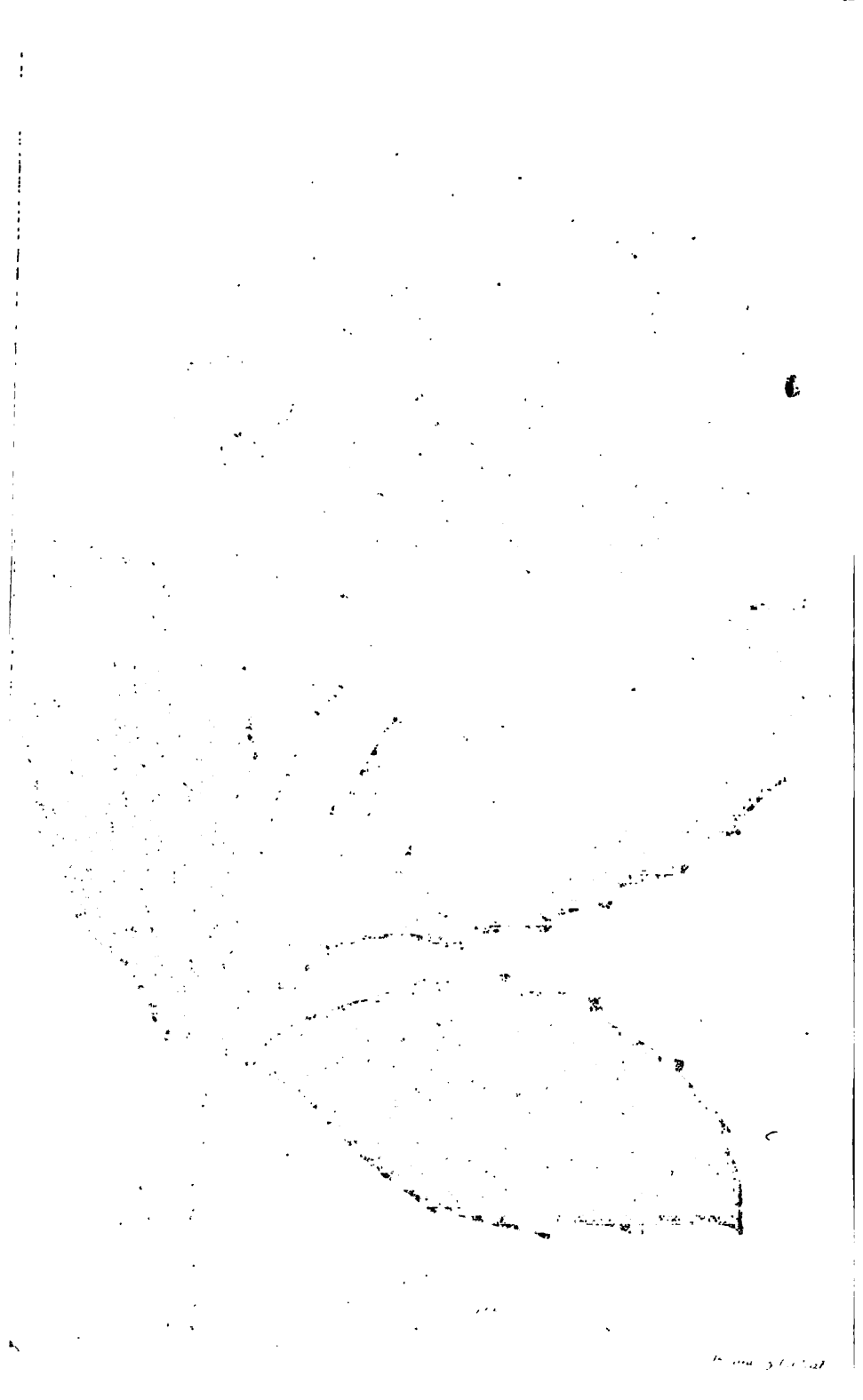
THE DAHLIA.

(PLATES 108 AND 109.)

At the commencement of a new volume we present our readers with two coloured illustrations of two of the best show Dahlias exhibited last season as seedlings, and to be sent out in spring next for the first time. Both of these have obtained first class certificates at the Royal Floricultural Society, and we generally recommend to the first class flowers by our best growers, as will be seen from the certificates given in another part of the present number.

Jessie was raised at Bath by Charles Salisbury, Esq., who is well known as a fancier to Dahlia growers as the raiser of Beauty, Sir F. Wrixon, Duke of Wellington, Bob, and several other varieties. Jessie is not only the finest yellow variety that has ever been put before the public, but is the best model—that is, possesses the greatest number of good points—we have in any Dahlia which we consider having a smooth evenly cupped petal, and a great depth of colour. The fault we could at any time discover was a want of symmetry in the centre of a few of the blooms exhibited. It, however, soon became established that it was shown in very large numbers,—six, twelve, and twenty-four blooms at a time, and that frequently.

Perfection is the production of Mr. John Keynes, of Salisbury, and is a good companion to Sir F. Bathurst, Rachel Rawlings and others by the same raiser. It was first named Eugenie, and is best known as Orange Perfection, but it is in future to be called Perfection. This variety was raised from Morning Star, and partakes of the colour of that old variety, bright shaded orange. The petal is very good, cupped, and beautifully arranged; we have heard it described as a little too flat and low in the centre. In this respect it partakes a little of the character of its parent, as well as in colour. It is, however, a very great improvement on Morning Star, as will be evident from the representation we have given.



THE

FLORIST, FRUITIST, AND GARDEN MISCELLANY.

THE DAHLIA.

(PLATES 108 AND 109.)

WITH the commencement of a new volume we present our readers with coloured illustrations of two of the leading Dahlias exhibited last season as seedlings, and to be sent out in spring next for the first time. Both of these have obtained first class certificates at the National Floricultural Society, and are generally esteemed as two first class flowers by our best growers, as will be seen from the returns given in another part of the present number.

Bessie was raised at Bath by Charles Sainsbury, Esq., whose name is familiar to Dahlia growers as the raiser of Beeswing, Sir R. Whittington, Duke of Wellington, Bob, and several other varieties. Bessie is not only the finest yellow variety that has come under our notice, but is the best model—i. e., possesses the greatest number of good points—we have in any Dahlia, when at its best, having a smooth evenly cupped petal, and great depth. The only fault we could at any time discover was a want of firmness in the centre of a few of the blooms exhibited. It, however, should be added that it was shown in very large numbers,—six, twelve, and twenty-four blooms at a time, and that frequently.

Perfection is the production of Mr. John Keynes, of Salisbury, and is a good companion to Sir F. Bathurst, Rachel Rawlings, and others by the same raiser. It was first named Eugenie, and is best known as Orange Perfection, but it is in future to be called Perfection. This variety was raised from Morning Star, and partakes of the colour of that old variety, bright shaded orange. The petal is very good, cupped, and beautifully arranged; we have heard it described as a little too flat and low in the centre. In this respect it partakes a little of the character of its parent, as well as in colour. It is, however, a very great improvement on Morning Star, as will be evident from the representation we have given.

To take prominent places and obtain first class certificates in such a prolific season for good flowers as 1855 has been, testifies greatly in favour of the two varieties we have now figured.

HORTICULTURAL SOCIETY.

THE late proceedings of this Society, in reference to its circular, and subsequent sale of plants, have given rise to rumours, which are rife everywhere, that the Council intend to break up the Society. It is therefore our duty to bring the subject forward, with the view of eliciting some opinion from those of our readers who may be Fellows, on the present critical position of the Society, and, if possible, to avert so disastrous an end to this excellent institution.

That the Society has been declining in public estimation for several years past has been painfully evident to all who have watched its course and are interested in the pursuits of horticulture; and yet, on looking at the state of that science in the British empire generally, never at any former period has it been so flourishing, or attained a position to enable it more to support an institution calculated to assist materially in developing the practical principles of horticulture, and, by experiment and research, of showing the theory on which those principles are founded. We think we are right in asserting that, as the interest felt in all matters relating to gardening has never been stronger than at the present time, a proportionate encouragement would have been given to this Society, had not some cause existed which has prevented that cordial co-operation of the horticultural body which in all societies is necessary for successfully carrying out specific objects. We may here notice the success which has attended the Royal Agricultural and other societies founded for the promotion of objects similar to those of the Horticultural Society, as well as to the numerous local horticultural societies which on the whole are well supported throughout the country; and yet, in the case of the London Horticultural Society, commenced under the most favourable circumstances, and supported for many years by all the rank and influence of the country, and professing to carry out objects second to none in importance, whether regarded as adding to the resources of the soil or furnishing examples of horticultural skill, actually failing in the midst of advantages such as never presented themselves so favourably before.

We of course do not believe that any apathy exists in the public mind in regard to the Horticultural Society as an institution; on the contrary, we believe that it would receive the cordial and energetic support of every admirer of a garden, if the principles and objects of the Society had been fairly carried out; and we are therefore compelled to look to the ruling body, as being partly, if not wholly, the cause why this has not been done. It is no part of our present intention to point out how, step by step, these fundamental principles of the Society have been suffered to become obsolete; nor yet to give an

opinion through whom or by what means so unfortunate a result has been arrived at; but as the difficulties of the Society are now acknowledged by its executive to exist, it should be the duty of all interested in the welfare of horticulture, whether Fellows of the Society or not, to come forward and rescue this institution from its present position, and reinstate it in its original sphere of usefulness.

Since the above was written, we have heard that in addition to their having disposed of the collection of plants, the Council also intend to dispose of the Society's Herbarium. Without questioning the right of the Council in this matter, we think it would be a most impolitic step, unless the rumour we noticed at our commencement is true, and that the entire abandonment of the gardens is intended. Under these circumstances, we hope some influential Fellows of the Society will take steps for calling a special general meeting, to ascertain what the plans and intentions of the Council are; and, if necessary, to appoint a committee of inquiry, to examine and report on the actual position of the Society's affairs, and the causes which have led to their present embarrassment; and likewise to suggest such alterations in the governing body and management as will more effectually promote the prosperity and usefulness of the Society in future.

According to the bye-laws of the Society a special general meeting can only be held while Parliament is sitting, and therefore we hope that this will be fixed for as early a day in February as will be convenient for Fellows to attend; and considering that the peculiar financial affairs of the institution must have been well known to the Council during last session, we are surprised that no steps were taken to bring the matter before the Society at that time.

Since the above was in type, we learn that a special general meeting has been convened for the 5th of February next. Let us hope that it may be a full one, and that the result may be the placing the Society in a position to effectually carry out its original intentions.

FERNS AND LYCOPODIUMS.

Of all modern *favourite plants*, I think there are none more deserving of general cultivation than Ferns and Lycopodiums. To take them individually, there is much that is interesting in most of them; and a group of nice healthy specimens, tastefully arranged, presents the most pleasing variety.

There are many of the exotic species which look unsightly when cramped up in small pots, but where sufficient space can be given them to develope their fronds, they are exceedingly beautiful. The species are so numerous, and varied in their habits, that it is possible to fill any given space it may be convenient to devote to their culture, whether it be a "Wardian case," or a "Crystal Palace."

For the winter decoration of sitting rooms, &c., the Ferns are found exceedingly useful, particularly where the means for having a large

quantity of "forced" plants is limited; with a few Roses, Hyacinths, Narcissus, &c., they are well adapted to mix; and for larger groups, with the addition of such plants as Euphorbia fulgens, Justicias, &c., not only will less plants be required, but the effect will be better, and the trouble less, as it obviates the necessity of using so much moss for rsufacing the parts.

Of flowering plants, there is no class which possesses that richness of colours so general amongst the Orchids; but, unless large and well-grown specimens, they have a stiff, naked appearance; but a plant even with only a few flowers will look well when placed amongst Ferns, their characteristics being so opposite as to naturally require the assistance of each other.

Ferns and Lycopodiums are, most of them, of easy culture: most of the Ferns delighting in a fibrous compost of loam and peat in equal proportions, with a small quantity of leaf-soil and sand. For the Lycopodiums a lighter composition is necessary; some nice fibrous peat, sphagnum moss, and leaf-soil in equal quantities, with a little sand, will grow them luxuriantly.

During their growing season (from February till August), they should be carefully shaded from bright sunshine, and the atmosphere kept moist, at a temperature of from 55° to 70°, for most of the tropical species. During the autumn and winter they may be subjected to a much lower temperature, provided they have properly matured their growth; to ensure this, they must be inured to light and air from the early part of September, when a temperature of about 40° to 45° will be quite warm enough. If they are required for winter decoration, of course it will be necessary to subject them to different treatment, in order to maintain their fronds in a fresh green state.

Many of the British species, and others that are hardy, from various parts of the world, are equally beautiful when seen as large specimens, either in pots or planted out.

J. SHUTER.

REVIEW OF THE PAST YEAR.

AMIDST the din of war, and consequent pressure on the energies of the country which the calamities of war entail, it is satisfactory to record the fact that, hitherto, the pursuits with which this Journal is connected have felt none of that depression which might reasonably have been expected. On the contrary, although both Horticulture and Floriculture are professions especially of a peaceful character, and in a great measure dependent on a high state of civilization and luxury, yet beyond the severe trials caused by the income tax and the high price of food, no diminution has taken place in the interest felt for gardening in general; and we may safely affirm that the nursery trade (a sure index of the prosperity of Horticulture), has not been so brisk for years past as in the one just closed. While this is true for general nursery stock, the demand for all the useful and popular plants of the day has

been unusually great; so much so, that, with many kinds, a number of orders remain on hand, for want of stock to supply them. This not only affords evidence of the increasing cultivation of ornamental plants, but shows likewise, that, notwithstanding our somewhat straitened position, the admirers of Flora have yet wherewithal to follow up the cultivation of their favourite plants; and if this be true with the admirers of the Carnation, the Pink, Pansy, Dahlia, and Hollyhocks, it is no less so with those who patronise the more rare productions of the greenhouse and stove. At the various public sales of *Orchids* during the past season, the prices given for all the leading kinds have been high, and warrant the conclusion that there is a great demand for really good varieties, and that their cultivation is increasing. Nor are we surprised at this; for, assuredly, no class of plants presents such endless variety, such brilliant colouring, or such delightful fragrance, as this interesting group; and now that their culture has been reduced to a simple line of practice by the writings of Williams and Lyons, &c., their management may be taken in hand without much fear but that with common care, and an avoidance of quackery, all will go on well.

If there is one class more than others which has fallen in public estimation, it is the Cape Heath, which for a few years back has not been so popular as its merits really deserve. This has arisen chiefly from a want of variety; or, in other words, from a general sameness when viewed in the mass, and perhaps for that love of showy colours which seems to have taken a strong hold on the public taste, to the evident detriment of the more delicate, but equally beautiful classes of plants. Chinese Azaleas, Pelargoniums, and one or two other groups, are certainly more effective for forming a display of colour at the great exhibitions, but they lack, on closerinspection, that neat habit of growth and exquisite form and colouring so peculiar to the family of Heaths. But as we shall soon witness the exhibition of varieties of more decided character, and which will contrast well with each other, we hope these old and deserved favourites will soon regain their former position in public favour.

Calceolarias, as exhibition plants, are losing ground; they are best treated as annuals, and are therefore sscarcely worth naming. On the contrary, Gloxinias have made a decided advance; the best strains of the erect blooming kind are very beautiful, and will be grown by every one who can command a warm pit. When in bloom greeenhouse treatment will suit them.

Variegated-leaved plants are much sought after, and deservedly so; for this interesting class is invaluable, either for mixing up with other plants, or for forming single groups—one of the handsomest new ones we figured at p. 65.

If we may judge of the interest taken in Ferns from the number of works now issuing from the press to describe and illustrate this family, we should say they are really at the head of the list; they are, however, worthy all that is said in their praise, and, as forms of graceful beauty, superior to many plants cultivated solely for their flowers.

Plants remarkable for fine foliage have likewise many admirers. We shall not soon forget how admirably these plants worked up

with Orchids, in forming those magnificent groups exhibited at the Crystal Palace Show.

Of plants generally, as exhibited at our leading Exhibitions, we have chiefly to notice a reduction in the size of the specimens, to their manifest improvement as examples of culture. We have all along advocated that mere size was not at all times a fair criterion of a plant's excellence; and although for a few years it enabled one or two large growers to maintain the lead, we see by the plants which have been exhibited this past season how much superior they are when shown with luxuriant healthy foliage down to the rim of the pot, and the size and clearness of bloom which belong to plants in the freshness of youth.

Of the Fruit which has been exhibited, if it has not surpassed the productions of former years it has, to say the least, been fully up to the mark, and has been brought forward in much larger quantities. The Cayenne Pines are becoming (now they are more known) great favourites both as summer and winter fruits. In Melons some of the new one promise well; Mr. Fleming's Hybrid and one from Mr. McEwen, of Arundel, were the best we tasted. Of the new Grapes, the Stockwood Golden Hamburgh will be an acquisition. Mr. Spencer, of Bowood, has likewise exhibited a seedling Muscat, which promises to be valuable; and we hear of another early white Grape being raised at Brighton. Of other fruit, several specimens of the Stanwick Nectarine have been exhibited, with recommendations which spoke highly of its qualities; we confess, however, that our own opinion is unfavourable to this ever proving a really useful fruit. Of the Salway Peach—a very late variety, introduced by Col. Salway from Florence—we hear from excellent authority that not only is it valuable for its lateness, but that it is likewise a delicious melting variety. Of the new Strawberries of 1854 which have been proved, we have only seen Omar Pacha, Filbert, and Sir Charles Napier, which have answered expectation; we hear, however, that Sir Harry has turned out well.

Space forbids our proceeding further. A notice of vegetable productions shall be given hereafter.

G. F.

THE EXETER NURSERIES.

It is much to be regretted that these large establishments lie so far away in the west of England, beyond the reach of a great number of visitors from various parts, to whom the great metropolis is the chief source of attraction. The city of Exeter, as most of our readers are aware, is situated in the west of England, and is about 200 miles on the Great Western Railway. We very recently visited the two Exeter nurseries, and as that of Messrs. James Veitch and Son was the first to which our attention was directed, we shall first detail a few observations respecting that establishment. This is one of the largest and best kept nurseries in the kingdom, in which will be found full collections of all the principal classes of plants in cultivation. Here you find growing

luxuriantly such plants as Piptanthus nepalensis, Eleagnuses, Pittosporums, and a number of shrubs and plants that are treated as greenhouse plants in the more rigid north. Devonshire is indeed a favoured locality, and a number of shrubs and plants live out during the winter that, with us, and especially further north, require considerable shelter, and in some cases greenhouse protection. In the open ground is to be seen growing freely large patches of the rarer sorts of Arbutus, Hollies, Photinias, and many of that better class of shrubs too seldom seen and cultivated; and a large collection of Conifers are grown here, and we particularly noticed a very beautiful specimen of Araucaria imbricata, with the same regular symmetrical form as the famed Dropmore specimen, only not so large. How such an exquisite tree must tempt many to become a purchaser of one or more of this noble plant! Many fine specimens of Conifers are to be seen here, and our attention was attracted by two varieties of Cupressus Lambertiana, one throwing its shoots in a horizontal direction, and the other maintaining an erect and close growth. Both varieties are handsome, and appear to be equally hardy. A small plant of Picea amabilis, which promises to be a noble companion for Picea Nordmanniana and nobilis; and small plants of Picea grandis and bracteata, both of which give promise of great beauty, are also planted out. No doubt these three species will prove very valuable additions to our hardy ornamental Conifers.

Close by the nursery is the private residence of Mr. Veitch, in the garden belonging to which are some new species of Conifers, of which we hope to give a description at some future time. Here, in a sheltered nook, close by the dwelling house, the beautiful Eugenia Ugni had ripened its fruit, which is of the size of a large black Currant. It is our impression that the Eugenia Ugni is destined to become an important plant, and that it will be much valued and cultivated for its fruit, for *when perfectly ripe*, the flavour bears a close resemblance to a good Pine-apple; in fact, it is a rich aromatic and indescribable flavour, being something between that of a good Pine and the Hautbois Strawberry, and even in gathering this rich odour is left on the fingers. In the Camellia house is a large plant of the Lapageria rosea trained over a portion of the house, and had then several of its rich scarlet blossoms fully expanded. It is a most valuable and beautiful climber, and seems to do best in a soil composed chiefly of peat and fibrous matter. This plant is not sufficiently known yet, for on its first introduction many were puzzled as to the treatment it should have, and in some instances it was treated as a hothouse plant, and in others as a greenhouse plant. A cool and shaded situation seems to suit it best, and when planted out in a border in a Camellia house, or in a cool and shady conservatory, it will no doubt do well. In the same house Fuchsia pendulina was in full bloom, and the Camellias were in most luxuriant health, and covered with a profusion of plump buds such as are not often seen. Geraniums are grown very well here, a house being devoted entirely to specimens. We noticed at the outside end of one of the houses a large plant of Fuchsia Dominiana, that had been flowering freely, and was now cased for the winter. This is really a

valuable winter-blooming conservatory plant, but somehow or other it is sadly mismanaged at times. It should be grown freely early in summer, and then checked, and its wood ripened early in autumn, so as to induce freedom of blooming in winter. Two or three houses devoted expressly to new and rare plants, many of which are not yet proved, are of the greatest interest, as well as one or two private gardens, in which new shrubs, herbaceous plants, &c., are planted for proving. In one of these, we noticed the true Embothrium coccineum, which has a broad leaf, and was well set with flower buds and is quite hardy. We have however seen another species with a narrow leaf, under the same name, but the latter seems to be Embothrium salicifolium, and is not hardy. We also noticed a new hardy herbaceous plant named Phygelium capense, which of course was not in bloom at that late season of the year, but we were told it was a welcome addition to this very useful class of plants, as was a new scarlet hardy Delphinium cardinale, the entire stock of which is in the hands of Messrs. Veitch and Son. Will not this plant indeed be a valuable acquisition? The beautiful little Leptodactylom californicum was blooming freely, and seen.s to require the same treatment as Roellia ciliata, and is a delightful winter blooming plant. In the Orchid house the charming little Sonerila margaritacea, with its spotted foliage and pale pink flowers with bright yellow stamens, was blooming freely, and the various species of Anæctochilus were growing freely in a much drier atmosphere, and with less nursing, than we generally see adopted, and which seems to be quite unnecessary. In this house was the beautiful Ouvirandra fenestralis, or lattice plant, immersed in tepid water, and growing luxuriantly. What an interesting plant this is; the leaf being so totally different to that of other plants, and a woodcut of which shall be given in our next number.

Close to the principal entrance of Messrs. Lucombe, Pince and Co.'s home nursery, is the original Lucombe Oak, now a noble tree, the trunk of which is several feet in circumference. At the entrance to the show house are two superb pyramidal Irish Yews in tubs, and in the show house, which is 120 feet in length by 18 feet in width, was a display of flowers such as we seldom meet with at this dormant season of the year. Several fine plants of Fuchsia Dominiana were in full bloom, as well as Primulas, Chrysanthemums, and other blooming plants. Several plants of the Pampas Grass in bloom were grouped among other things, and produced a very pleasing effect. Close by is the Camellia house, a noble structure, 240 feet in length by 24 feet in width, and filled with splendid specimens of Camellias loaded with buds. These are all carefully *thinned* to one bud at the point of each shoot. Passing through the Camellia house we enter upon the Rockery, situated in a circle, the diameter of which is about 150 feet, and enclosed by a thick Laurel hedge, several feet in height. Here is to be found a piece of rockwork, arranged with truly artistic skill. What was once an ordinary basin for a fountain, has, by the skilful arrangement of large blocks of stone, been converted into rocks and caverns, between which a stream of water passes gently on. A natural ruggedness is thrown over the whole, and various plants suitable to the locality are charmingly

interspersed. It would shame half of our landscape gardeners of the present day. At one side of the rockwork is a splendid specimen of the majestic Pampas Grass, about 10 feet in height, and possessing 12 fine spikes of silvery feathers glistening in the sunshine. What a noble ornamental hardy plant for a lawn, with its handsome drooping foliage! Here, too, is a noble specimen of Pinus insignis full 40 feet through, and about 50 feet in height, a fine specimen of Pinus Sinclairi, 8 feet high: Pinus macrocarpa, 15 feet high, and a beautiful specimen of Biota japonica, 8 feet high. On the rockwork are Desfontania spinosa, Skimmia japonica, and other new and ornamental plants. By the side of a long walk, reaching nearly half a mile, are superb specimens of Pinus insignis, Abies Douglasi, Picea Nordmanniana, and various other valuable Conifers, planted in large tubs composed of stout pieces of wood, banded tolerably close together so as to admit of a partial egress of the roots, and to ensure the safe removal of the specimens, as many of the Pinus insignis and other conifers are of considerable height and size. At the end of the walk is a small Pinetum, in which we observed one of the finest specimens of Picea pinsapo we have ever met with.

This nursery is remarkable for the immense stock of Conifers it contains. There are large quantities of Araucarias, all handsome well grown plants from 2 to 6 or 7 feet in height, large quantitiess of Pinus Cembra, Juniperus sinensis, Irish Yews of all sizes; and, in short the finest stock of Conifers in the kingdom. Great attention has been paid to standard Portugal Laurels, of which a quantity is to be seen with clean straight stems, and symmetrically trained heads. Ours was a hurried visit to both of these fine establishments, and we hope on a future occasion to give further details respecting many new plants that are in both nurseries, and that we had not time to notice. Passing through the houses, and specimens, Heaths and green house plants are well done and extensively grown here. We noticed the fragrant and beautiful Luculia in full bloom, as well as the graceful winter blooming Thyrsacanthus rutilans, with its pendent racemes of scarlet blossoms. Here also was a good plant of the handsome Bouvardia longiflora, with its clear white Jasminum like flowers. It is a charming winter blooming plant, and is very valuable for bouquets; there is a fine collection of Orchids here, several of which were in bloom, but unfortunately we had not time to take notes respecting them.

CONSIDERATIONS ON SOILS.

THERE is no subject of so much interest and of such vital importance to mankind, as a knowledge of the nature, constitution, and origin of soils; the causes of diversity in mineral character, and of their natural productiveness. When we consider that the corporeal frame of every organised being requires a certain amount of food to keep up its healthy action, and that the products of the soil supply this food, and that the amount of this supply will be in proportion to the fertility of

the soil—its importance is at once apparent. And yet, how completely ignorant of the subject were mankind in general until lately!

That concentrated force of scientific discoveries and mechanical inventions which so wonderfully increased the productive powers of so many mechanical arts and manufactures at the close of the last and the commencement of the present century, also set in action the wheels of horticulture and agriculture, thereby augmenting the productive powers of the soil in a ratio proportionate to the degree of scientific knowledge brought to bear on the subject. To the practical application of chemistry and geology are we principally to ascribe the rapid progress made of late years in every department of gardening and farming. Geology informs us that the surface of our globe consists everywhere of a more or less solid mass of rock, covered with a layer, generally thin, of loose material; that the upper part of these loose materials forms the soil.

The geologist has examined those rocks which lie beneath the soil, and has discovered them to be very different in appearance and composition—some are sandstones, others limestones, and so on. These rocks, when exposed to the action of the weather, are seen gradually to crumble away; in this manner are soils naturally formed, and they consequently assume the character of those rocks. This at once accounts for the diversity of soils. Armed with a *practical* knowledge of this science, we shall be able to ascertain the nature of the soils we cultivate, and shape our practice accordingly. But though geology tells us the general character of land in a district—throws much light on the nature and origin of soils, and on the causes of their diversity—still it is chemistry which tells us that soils, of whatever kind, are made up of two parts—an organic and inorganic part. It is chemistry that tells us that vegetables are made up of two parts—an organic and inorganic part. It is chemistry which tells us that though vegetables not only may, but actually do, derive a considerable portion of their organic part from the atmosphere, they derive the whole of their inorganic part from the soil. Chemistry also tells us that those soils which contain these inorganic parts in greatest abundance are naturally the most fertile.

It is not necessary that we all become professed chemists to be able to ascertain the quantities of the different inorganic constituents in a soil sufficiently accurate at least for all practical purposes. "The instruments," says Sir H. Davy, "required for the analysis of soils are few and but little expensive. They are a balance capable of containing a quarter of a pound of common soil, and capable of turning when loaded with a grain; a wire sieve sufficiently coarse to admit a mustard seed through its apertures; an Argand lamp and stand; some glass bottles; Hessian crucibles; porcelain or Queen's ware evaporating basins; a Wedgewood pestle and mortar; some filters made of half a sheet of blotting paper; a bone knife; and an apparatus for collecting and measuring aeriform fluids." "The chemical substances or reagents required for separating the constituent parts of the soil are muriatic acid, sulphuric acid, pure volatile alkali dissolved in water; solution of prussiate of potash and iron; succinate of ammonia; soap lye, or solution of potassia; solution of carbonate of ammonia, of muriate of ammonia, of neutral carbonate of potash, and nitrate of ammonia."

The professed chemical analyst now-a-days requires more things than those enumerated by Sir H. Davy. But even with these much may be done. If by the application of a chemical test any of the salts of iron are detected, they can be decomposed by lime. If we find an excess of silicious sand, it is improved by the application of clay and calcareous matters, and so on.

The physical properties of soils are also a most important consideration, and must be attended to, as well as the chemical qualities, if we are to cultivate successfully. By an attentive study of these sciences—by obtaining a thorough knowledge of vegetable physiology, and by being intimately acquainted with everything in any way appertaining to vegetable life, gardeners will raise themselves to the rank of professional men. And if to these they unite a practical knowledge of their business, it will then matter little to them whether they are called upon to manage a garden or an estate; they will have within themselves resources equal to any situation. Nor will it matter to them what part of the habitable globe they may have to exercise their calling; they will be able to adapt their practice to any circumstances.

M. SAUL.

WINTER FLOWERING PLANTS.

FLOWERS, always desirable, are more than ever so at this season, when the lack of them in the open garden is not much compensated for by what is obtained by our ordinary greenhouses and stoves. It is winter, and plants feel that it is so; and were it not that we now-a-days grow many plants from southern climes, which come into bloom naturally at this season, our display of winter flowering plants would by no means be so effective as it is. I append descriptions of a few I grow myself, for your journal.

Euphorbia fulgens.—This is a stove plant from Mexico, throwing out long flexible shoots, sparingly furnished with leaves; the flowers (as they are commonly called) are in clusters of from four to six, on short footstalks produced from the joints or axils of the leaves for a considerable length at the upper end of the shoots. The flowers (or coloured involucre) are of a bright scarlet colour, and exceedingly showy; and when the plant is well grown we have nothing so brilliant at this season. This plant is a bad one to grow either as a bush or trained, in consequence of its straggling habit. Well ripened wood will strike freely in bottom heat in February or March, after blooming. When potted, plunge them close to the glass in a slight bottom heat, and stop them back; they will soon form three or four lateral shoots, and if small plants only are required, these should be trained on boards and then upright, so as to form nice shaped specimens; five or six-inch pots will be large enough for them, and after the young wood has grown five or six inches the plants may be removed to a light part of the stove; when fully exposed to light, and near the glass, they should be kept comparatively dry and cool during October and November, to ripen the summer growth; after which, by again placing them in the stove,

they will quickly come into bloom, and continue gay throughout the winter. If larger specimens are required, the spring struck plants must have each shoot stopped again in July or August, and at the same time an additional shift. Keep them close and warm for a week or two, to induce them to break; and when the young shoots have grown a few inches the plants may be taken to the stove or any house with a moderately warm temperature, expose them to the sun, and give them air freely; here the young wood will ripen. This second stopping and late growth rarely produce blooming shoots, nor is that the object. When winter arrives let the plants be watered very sparingly, and they need only have a very moderate heat, as they will bear a low temperature, if kept dry. In March repot the plants, shaking from the roots all the old soil. Half peat and loam, with a good portion of small charcoal mixed with it is a good compost for them. The shoots should be carefully tied out and cut back to six inches. If the previous stopping has been well managed, a good *bottom* will be obtained, from which, with care, well formed plants can be grown. Place them in the stove close to the glass; they will soon break, and when the young shoots are six inches long, stop these, which will be in April. The plants may now be shifted into their blooming pots, eight inches, and the shoots carefully tied out as they grow. To prevent the young wood becoming elongated, let the plants, during the entire period of their growth, be both fully exposed to the light and kept as near the glass as possible. During the summer water freely with liquid manure; but water (as before noticed) should be gradually withheld towards the end of September, and the plants placed in a drier and cooler house, to ripen their wood. Treated in this way, Euphorbia fulgens is really a most attractive object. I have had bushes three to four feet high, and three feet through, the ends of each shoot being thickly studded with their bright-coloured bracts. For the winter decoration of the conservatory or drawing-room there is nothing more beautiful than this. Placed in a vase, and surrounded with Ferns, to hide the lower parts of the plants, where there is a deficiency of bloom, it forms a most effective group, and at the same time it is equally valuable for cutting from.

Eranthemum pulchellum.—This is another free-growing stove plant, producing flowers of the brightest blue at mid-winter; hence it is extremely valuable for mixing with other plants, blue flowers being very rare at this season. There is no better place to grow this during the early part of the season than a common Cucumber or Melon pit. After blooming, form the shoots into cuttings, place them singly in thumb pots, and plunge them in a brisk bottom heat; in a month they will be ready to pot off into three-inch pots, when they should be again plunged and kept near the glass; by May they will be nice stocky plants, and will want repotting, which should be into 6-inch pots; plunge as before, and stop the plants, when they will soon grow into bushy specimens, and by June or July may be transferred to the stove. Loam, peat, and a little leaf-soil will suit them best, as they are strong-rooted plants, and will require liberal help with liquid manure. They should be always kept near the glass, and require a stove heat all through

their growth. Towards Christmas the heads of flowers will appear, and the plants will continue producing a succession of bloom for two or three months, if taken care of, and well supplied with manure water.

Justicia carnea and *carnea major* may be treated in the way described for Eranthemum, but as they are free growers larger pots must be used for them; they require plenty of light and an abundance of water when growing. By management these may be made to flowers for several months in the year; they produce large spikes of deep rose or flesh-coloured flowers, which are very showy and useful at this season; and as they are easily grown, a stock for winter blooming should always be prepared.

Conoclinium ianthinum is a coarse-growing stove plant, flowering likewise in the winter months, when its pale blue heads of flowers—resembling the well-known Ageratum mexicanum—form a useful contrast for mixing with other plants, or as single specimens. This Conoclinium may be treated the same as recommended for the Eranthemum, except that it will require more pot-room and plenty of manure-water when growing. Expose them to plenty of light, and frequently syringe them overhead, to keep down red spider. Towards September they should be placed in a cooler house, with a drier atmosphere; this will check their growth, and induce them to set for blooming, which they will readily do when placed in a warmer house again.

(To be continued.)

THE PEACH.

Of all wall fruits the Peach and Nectarine are considered the most valuable in this country; and as their cultivation is very often a failure with amateurs, I send you a few hints on their treatment, with a hope that it may prove of benefit to your amateur readers.

In the first place, all remarks made as to the cultivation of the Peach will apply to the Nectarine as well, unless special reference is made to the latter.

Your talented correspondent, Mr. Saul, and other contributors, have written such practical good sense on the advantages of thorough drainage to all fruit tree borders, that I need only refer your readers to their articles on the subject generally. For the Peach in particular it should be *ample*, unless the subsoil consists of dry rock or gravel; excavate the side of the border three feet, and fill up with eighteen inches of rubble stone, brickbats, mortar rubbish, clinkers, or, in fact, any materials that will act as drainage. The bottom of the borders should slope up from the front upwards to the wall, and as I do not care for a border more than ten feet wide, a rise of twelve or eighteen inches may be allowed, taking the greatest rise for districts which are unfavourable from too much wet or a cold climate. We premise one or two good drains will run lengthways beneath the rubble to carry away the water, which, in heavy rains, will percolate through the drainage, as well as to remove water from the subsoil. Over the drainage place

any odd litter, leaves, or loose spray from the clipping of hedges, with the object of preventing the soil from washing down into the drainage, which should, by the bye, have the finer portions placed uppermost. The excavation for the border should be so managed that when the border soil is placed on the bottom it should be eight or ten inches at least above the level of the front of the border; this will throw the border considerably above the general surface, a point of much importance especially—as we noticed above—where the climate is unfavourable. So much for *drainage*; I must next proceed to notice *soil*.

In many places this is a great drawback to Peach growing, and parties planting this fruit, sooner than be at much expense in procuring proper compost, plant the trees in common garden soil, which most likely has been annually enriched for years with manure, and the result is that in two or three years the trees are in that state of luxuriance that no after management can save them, and they fall a prey to canker or gum, or the equally fatal *blight*—*i. e.*, the black and green aphis. This is no over-coloured statement. If all the Peach trees which are yearly planted had proper care taken in providing them with a suitable soil, why one-third or less of the number would suffice. But I think I hear some one say, How are the nurserymen to live? I hope they will forgive me for naming them, but, if a gentleman had not to buy so many young Peach trees as formerly, he has the cash for something else in the nursery way. Besides, did more success attend Peach growing than is now the case, many others would follow the example; and I doubt not, instead of losing a customer they would gain by the result.

The Peach will grow in almost any soil, excepting those very sandy, or of a stiff clay. Some other soils are inimical to the Peach, as those which contain a large proportion of iron. I have found that the Peach is a very short-lived tree, when growing on the upper greensand formation; no doubt owing to the soil containing particles of the silicate of iron. The soils most suitable are calcareous loams, especially when of a marly texture; the yellow loams found round London, and in most of the south-eastern counties, the red loams of the new red sandstone; in fact, colour is not so essential as consistency, and any soil between yellow and a dark brown inclining to peat will answer if it contain a sufficiency of clay or marl to come under the term loam. If possible, it should be taken from pasture land, spit deep, and can generally be procured from commons, moors, or waste land, selecting it from high ground, as preferable to low, the latter being sometimes soured from springs or lying damp. When this is unavoidable, a little fresh lime should be thrown over the under-sides of the turves when stacked. When the loam is got together stick it up in narrow ridges, and in a couple or three months it will be fit for use. But fresh loam, as I have described, cannot be obtained, and therefore a substitute must be provided; the cleaning out of ditches, and parings of roads, &c., are within every one's reach; these should be mixed with some heavy loam from arable land, or common garden soil which has not had much manure; these should be well mixed together, and if the compost appear too close and heavy, a small quantity of stubble or Bean-

straw may be strewed over the compost when it is put in the border, and which may be further improved by a small quantity of gritty road scrapings, which is a capital material for improving strong clayey composts, and may be added to the turf with advantage, if it is too heavy. The mixing and turning over of these ingredients should always be done when in a dry state; the best time to collect the different soils is the autumn, and once or twice in frosty weather, they should be turned over. This is not absolutely necessary with turves, unless of heavy texture and sour; but where the scourings of ditches, &c., are used, the mixture is much improved by exposing it to the action of the weather. By the beginning of March it will be ready for filling in the border.

A GARDENER IN THE COUNTRY.

THE LATE MR. GROOM'S TULIPS.

WHO has not heard of the famed bed of Tulips grown at Clapham Rise by the late Mr. Henry Groom, which we once heard described as resembling Tottenham Court Road in length? This bed, as well as the extensive collection of breeders, &c., is now distributed, having been sold by auction by Messrs. Protheroe and Morris on the 30th October last. It may not be known to some of our readers that Mr. Groom died suddenly last summer of disease of the heart.

To Mr. Groom's perseverance we are indebted for the introduction of many beautiful varieties of the Tulip, the result of forty years' practice in hybridising and improving this chaste flower. Many of Mr. Groom's best seedlings, however, are only known to those who have had the opportunity of seeing them growing at Clapham Rise, as Mr. Groom did not exhibit, and the high prices quoted for them prevented their being generally distributed. The last priced catalogue published by Mr. Groom in the autumn of 1854, contained three varieties at the enormous figure of *one hundred guineas each*, namely, Duchess of Cambridge, Princess Mary of Cambridge, and Miss Eliza Seymour, all of Mr. Groom's own raising. There is also one at fifty guineas, twelve at twenty-one guineas each, and four at ten guineas each We need not add that such prices for a single root would prevent their being distributed to any great extent. We expect to see some of the varieties improved by being grown away from Clapham, others may not be so good by the change, as Mr. Groom's method of culture was to starve them into purity. No one can admire a delicately marked pure flower more than ourselves, but we must have an average sized flower with it. If they must be dwarfed into pigmies to give them that waxy appearance we should be afraid of them; but having grown several of Mr. Groom's varieties we are of opinion they will stand good growth without becoming foul. For instance, we have seen much finer specimens of Groom's Queen Victoria grown in other collections than we have ever seen in Mr. Groom's bed. Mr. Groom adopted the plan of mixing large quantities of coarse river sand in the soil.

As regards the sale, the prices averaged but low, there being but a

poor attendance of purchasers. The best bed consisted of 235 rows, seven in a row, which gives 1645 bulbs in the long bed alone. They were sold in lots of one row each, the highest lot fetching 60*s.* only for the seven roots. There were many very fine and valuable seedlings sold equally low in price. There is now, therefore, a probability of the finest of Mr. Groom's flowers finding their way into many more collections than have hitherto contained them, at least we do not think exorbitant prices will stand in the way. We were pleased to see that the unnamed breeders, with a few exceptions only, fell into the hands of one person. This will prevent confusion hereafter, as we do not want a repetition of the Chellaston mixture again, having quite "aliases" enough already.

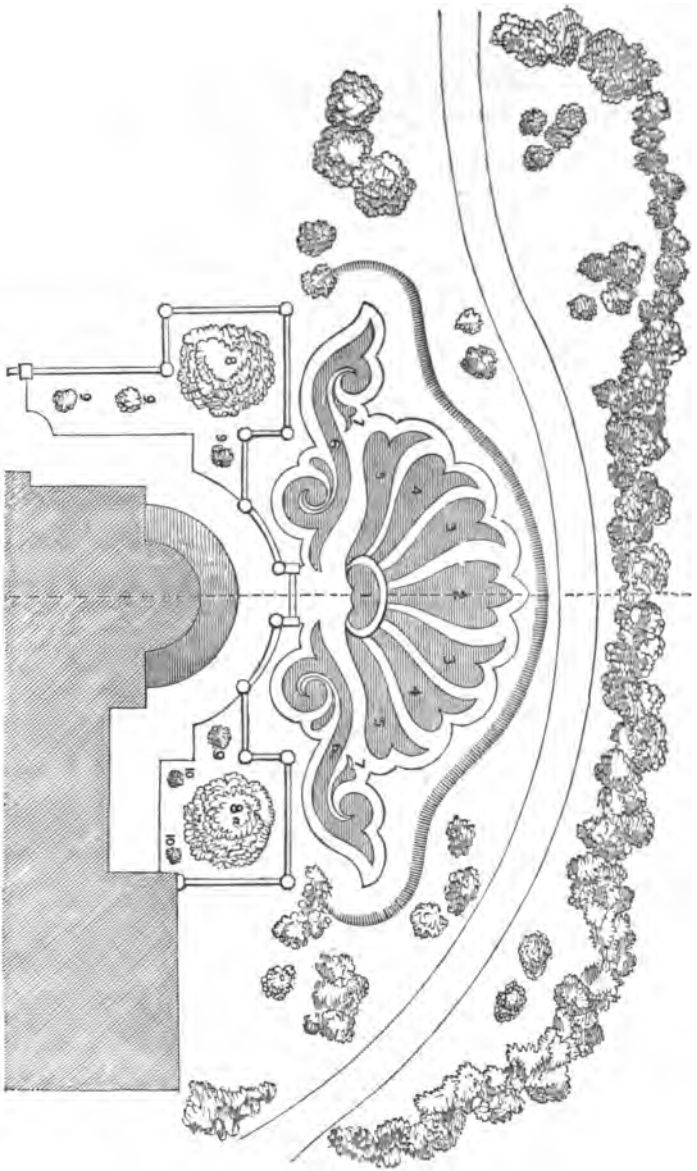
We have annually inspected Mr. Groom's collection when in bloom, and in May last we noticed as being fine, which are but little known:—Marquis of Bristol, Orpheus, Lord Raglan, Louis Napoleon, Duke of Newcastle, Dr. Horner, Mr. F. Perkins, Earl Stamford, and Omar Pacha. These are bizarres. The following are byblœmens:—Duchess of Cambridge, Baron Gersdorff, Eurydice, Viscountess Canning, and Themis. Good roses were not numerous; Lady Grey, Fleur de Marie, Princess Mary of Cambridge, and Miss E. Seymour were the principal of Mr. Groom's seedlings in this class.

LANDSCAPE GARDENING. No. IV.

THE accompanying plan was made for a case which may be taken as the type of a very large class of London villa residences, comprising an elegant and well-arranged mansion of comfortable dimensions, and a pleasure-ground of two or three acres, well furnished with magnificent shrubs. On one side of the house the coach-ring separates it from a lawn, appropriately occupied by clumps of choice shrubs. From the next side extends a long broad lawn, fringed on each side by fine detached specimens of large shrubs and trees; and the third side, which was most contracted, and unavoidably so, had, nevertheless, a very fine distant landscape, which only required a little improving in the way of cutting down non-ornamental trees which interfered therewith.

The weak points were—the poverty of the foreground on this side, which was the more to be regretted, as the library and drawing-room looked out upon it;—the absence of the element of flower-garden, or rather, that the beds occupied by the usual plants coming within the meaning of the phrase, were scattered about, and most of them out of sight of the house;—and that the house itself was simply seated upon the cold turf, the abruptness of the connection between it and the surrounding almost natural scenery being unsoftened by any transition *link*.

There being a slight inclination from the house, we took advantage of this to obtain a gravel terrace, broken only by a few shrubs, some of which were existent, and we arranged the boundary curb with reference to them. Beneath this we extended a level platform, as a fitting place for the *parterre* proper. We believe the woodcut and reference table will explain the cut. The beds are bounded with Box, and the feathers springing out of the volutes of side scrawls are also Box. The whole is laid down on white shell gravel.



1. Neutral tint Heliotrope.
2. Scarlet Geranium (tall).
3. Purple Verbena.
4. Yellow Calceolaria.
5. Blue Lobelia.
6. Rose and pink Verbenas.
7. Box.
8. Laurustinus bushes existing
8*a*, Ditto, planted to match.
9. Thuja aurea.
10. Taxus erecta.

WILLIAM DAVIDSON.

NEW PLANTS OF THE YEAR.

(From " EDWARDS'S NATIONAL GARDEN ALMANACK," *by permission of the Proprietor.)*

Abies Hookeriana. } Californian Conifers, forming large handsome evergreen
Abies Pattoniana. } trees. Mr. Murray.

Abutilon insigne. A large-growing handsome flowered plant, with large foliage: flowers white, almost covered by rich carmine veining. New Grenada. Stove evergreen shrub. M. Linden.

Acacia Drummondii microphylla. A fine variety of a well-known handsome yellow-flowered greenhouse evergreen shrub; habit compact. Swan River. Messrs. E. G. Henderson & Son.

Acacia Neilli. A distinct greenhouse variety. German Gardens.

Æchmea mucroniflora. A pine-apple-like plant, with scarlet bracts and yellow flowers. Demerara. Stove perennial. Kew Bot. Gard.

Albuca Gardeni. Dwarf, white Scilla-like flower spikes. Natal. Greenhouse bulbous perennial. Kew Bot. Gard.

Amphicome emodi. A beautiful half-hardy perennial; flowers large funnel-shaped, with an orange tube and pale rose-coloured limb. Northern India. Kew Bot. Gard.

Amygdalus pumula albo-plena (*Prunus Sinensis*). A fine novelty. German Gardens.

Andromeda formosa. A fine hardy evergreen shrub, with prodigious clusters of white flowers. Messrs. A. Henderson & Co.

Aphelandra Porteana. A very showy shrub; bracts deep orange; flowers yellow; leaves blotched with white near the centre. Brazil. Stove evergreen shrub. M. Morel.

Aphelandra variegata. A fine stove shrub, similar but inferior to *A. Porteana;* bracts brilliant orange; flowers yellow; leaves variegated. Brazil. Stove evergreen shrub. M. Morel.

Aralia jatrophæfolia. A graceful greenhouse species. M. Linden.

Aralia juglandifolia. A hardy ornamental foliaged plant. Belgian Gardens.

Araucaria multiceps. Greenhouse variety. German Gardens.

Bambusa nigra. A fine ornamental plant for open ground; black stems. French Gardens.

Begonia natalensis. Neat, in the way of *B. Dregii*, but larger; flower flesh-coloured. Natal. Greenhouse tuberous perennial. Kew Bot. Gard.

Begonia picta. An ornamental variegated foliaged plant for the stove. Messrs. E. G. Henderson & Son.

Begonia splendida. A stove plant with ornamental foliage: striking and magnificent. Messrs. Rollisson and Sons.

Begonia urophylla. A fine species; leaves large, cordate with a tail; flowers white, in large dense panicles. Introduced to Kew from the Belgian Gardens.

Billbergia Quesneliana. A handsome Bromeliaceous plant; leaves externally zoned with white; bracts forming a densely imbricated spike, rose colour, with scattered white wool; the flowers violet. French Guiana. Stove perennial. French Gardens.

Billbergia viridiflora. A slender-growing pine-apple-like plant, with a long pendent raceme bearing distant deep rose bracts, and green flowers. Stove perennial. German Gardens.

Billbergia Wetherelli. Showy; pine-apple-like leaves, and a pendent spike of deep blue flowers issuing from large rich scarlet bracts. Bahia. Stove perennial. Kew Bot. Gard.

Bolbophyllum lasianthum. Flowers nearly two inches long; dull purple, copiously covered with long fleshy hair-pointed bristles. Manilla. Mr. Loddiges.

Bougainvillea glabra. Interesting stove climber. French Gardens.

Bouvardia Houtteana. A fine showy plant; flowers orange red, in crowded terminal corymbs. Central America. Greenhouse sub-shrub. M. Van Houtte.

Campanula primulæflora. Handsome; flowers purple lilac. Portugal. Hardy perennial. Kew Bot. Gard.

Canna Warczewiczii. Showy; a fine species of this stately genus; flowers deep scarlet, bracts blood red. Costa Rica. Stove perennial. M. Warczewicz.

Catasetum incurvum. A fine orchideous epiphyte; flowers dull green, streaked and stained with purple; very large; probably the largest among Orchids. S. America. Stove epiphyte. M. Warczewicz.

Chætogastra Lindeniana. A magnificent Melastomaceous shrub; foliage neat; flowers large, deep crimson. New Grenada. Stove shrub. M. Linden.

Chamærops palmetta. A palm, said to be hardy. French Gardens. [Possibly the old Virginian *C. palmetto.*]

Clematis campanulæflora. A very distinct variety with bell-shaped flowers. Belgian Gardens.

Cœlogyne micrantha. Flowers small, pale brown Malacca? Stove epiphyte.

Cœlogyne plantaginea. A fine epiphyte; flowers greenish yellow, with a white tip, streaked with brown. India. Stove epiphyte. The Bishop of Winchester.

Craufurdia fasciculata. A beautiful climbing Gentian; flowers rich violet purple. Khasya. Greenhouse climber, probably annual. Messrs. Veitch.

Cuphea eminens. Flowers tubular, greenish yellow, tinged with red at the base. Mexico. Greenhouse sub-shrub. M. Linden.

Cupressus Lawsoniana. A handsome evergreen tree, with graceful foliage, growing 100 feet high. Mr. Murray.

Cupressus M'Nubiana. An evergreen shrub of moderate size, exceedingly handsome. California. Messrs. Veitch.

Delphinium cardinale. A beautiful hardy plant; flowers brilliant scarlet with the petals yellow. California. Hardy annual. Messrs. Veitch.

Dendrobium Amboinensis. An Orchid with blossoms of a bright rosy red colour, tipped with green, and freely produced in clusters up the stems. Amboyna. Messrs. Rollisson & Sons.

Dendrobium cymbidioides. An interesting and distinct Orchid, with lemon-coloured flowers. Java. Messrs. Rollisson & Sons.

Dendrobium cumulatum. A beautiful epiphyte; flowers delicate transparent pink, the lip freckled with rose colour, vanilla scented. Native country not known. Stove Orchid. F. Coventry, Esq., and C. B. Warner, Esq.

Dendrobium MacCarthiæ. A charming epiphyte; flowers pale rosy purple, the lip veined with darker purple. Ceylon. Stove epiphyte. Kew Bot. Gard.

Dipladenia acuminata. Very showy; the flowers large, bright rosy pink. Brazil. Stove evergreen shrub. Messrs. Veitch.

Dipladenia Harrisii. Showy; a climber with fine foliage and noble clusters of yellow flowers. Trinidad. Stove evergreen climber. Messrs. Veitch, also Messrs. Low & Co., Garaway & Co., &c.

Drymonia villosa. Shaggy leaves and stems; Achimenes-like flowers. Surinam. Stove soft shrub. M. Van Houtte.

Embothrium coccineum. Very showy; leathery shining leaves, and rich scarlet flowers in racemes. Straits of Magelhaens. Hardy evergreen shrub. One of the finest plants of the season. Messrs. Veitch.

Escallonia densa. A greenhouse plant of neat and dwarf habit. Belgian and French Gardens.

Escallonia pterocladon. A Pernettya-like shrub; flowers creamy white, tinged with red. Patagonia. A hardy free-blooming fragrant evergreen shrub. Messrs. Veitch.

Eucharis grandiflora. Flowers of a clear white colour, and twice as large as *E. candida.* M. Linden.

Eugenia javanica. An ornamental foliaged stove plant. Java. Messrs. Rollisson & Sons.

Eupomatia laurina. A botanical curiosity; flowers yellow, highly fragrant. Australia. Greenhouse evergreen shrub. Messrs. Arthur Henderson & Co.

Fagræa morindæfolia. A stove plant with magnolia-like foliage, and spikes of rosy coloured flowers, with pure white mouth. Java. Messrs. Rollisson & Sons.

Fagræa pelegrina. A stove plant, very handsome and free-growing, producing clusters of large white flowers. Java. Messrs. Rollisson & Sons.

Genetyllis Hookeriana. A fine shrub, less showy than *G. macrostegia*; figured by Sir W. Hooker under the latter name, and known in gardens as *G. fuchsioides.* Bracts purplish red. W. Australia. Greenhouse evergreen shrub. Messrs. Cunningham & Fraser, and E. G. Henderson & Son.

Genetyllis macrostegia. A fine shrub, known in gardens as *G. tulipifera.* Bracts white, streaked with red, pendent, arranged like a tulip-flower. W. Australia. Greenhouse evergreen shrub. It is the *Hederoma tulipiferum* noticed last year. The names of this plant and the preceding have recently been rectified by Prof. Meisner. Figured in the *Florist* for July. E. G. Henderson & Son, Garaway & Co., and Low & Co.

Gilia d anthoides. Pretty, dwarf, and suitable for beds; flowers rosy lilac; Hardy annual. Messrs. Veitch.

Hoya grandiflora. Similar to H. imperialis, but the blossoms are pure white. Java. Messrs. Rollisson & Sons.

Hoya lacunosa. Curious; the habit neat; the flowers small, cream-coloured. Eastern Archipelago. Stove evergreen trailer. Messrs. Veitch.

Huntleya cerina. A lovely Orchid, of a delicate canary colour; very showy, and one of the handsomest species of this section. St. Paul. Messrs. Rollisson & Sons.

Ixora affinis. Stove evergreen shrub with scarlet flowers. Amboyna. Messrs. Rollisson & Sons.

Ixora amboinensis. A stove shrub, and truly magnificent, with orange and scarlet blossoms, in heads eighteen inches in diameter. Amboyna. Messrs. Rollisson & Sons.

Jacaranda velutina. A very fine shrub with velvety leaves, and splendid blue bell-shaped flowers. S. America. Stove shrub. M. Linden.

Juniperus pyriformis. A low tree, 10-12 feet high. California. Messrs. Veitch.

Lapageria rosea alba. A greenhouse climber of great merit, with large pendent white bell-shaped flowers. French Gardens.

Leptodactylon californicum. A lovely dwarf sub-shrubby plant, with the appearance of a Phlox; flowers delicate rose-pink. California. Half-hardy sub-shrub. One of the best plants of the season. Figured in the *Florist* for October. Messrs. Veitch.

Lilium nepalense. A fine hardy bulb; flowers yellow, or in the garden specimens greenish, speckled inside with purple. Nepal. Horticultural Society.

Loasa Schlimiana. Curious; flowers yellow, of singular form. New Grenada. Half-hardy annual. M. Linden.

Locheria magnifica. A handsome Gesneraceous plant; flowers scarlet, lined and dotted on the face with dark purple. New Grenada. Stove perennial. M. Linden.

Lycaste mesochlæna. A fine epiphyte, with large green flowers having a dull yellow lip, which is fringed on the lower half of its middle lobe. In the wild state, it is said to have ivory-white flowers. S. America. Stove epiphyte. M. Warczewicz.

Lychnis Sieboldii. A fine white-flowered herbaceous plant, with the habit of L. grandiflora. Japan. Hardy perennial. M. Van Houtte.

Mandirola lanata. A very curious Gesneraceous plant discovered by M. Ghiesbreght in Mexico. M. Linden.

Mandirola picturata. Handsome variegated leaves, and deep rosy lilac spotted flowers. A hybrid stove perennial. M. Van Houtte.

Mandirola Roezlii. A fine Gesneraceous hybrid; flowers large lilac; leaves blotched like Gesnera zebrina. Stove perennial. M. Van Houtte.

Meyena erecta. A beautiful shrubby plant; flowers Achimenes-like, with a wide tube; rich deep violet purple, with a yellow throat. W. Africa. Stove shrub. One of the best plants of the season. Messrs. Rollisson & Sons.

Nepenthes javanica picta. A distinct and compact growing Pitcher plant, from Java. Messrs. Rollisson & Sons.

Nicotiana fragrans. Fragrant white flowers, with a long slender tube. Isle of Pines. Half-hardy perennial. Kew Bot. Gardens.

Nymphæa Boucheana. A handsome flesh-coloured hybrid stove aquatic, between N. Lotus and N. rubra, raised by M. Bouche in the Berlin Bot. Gard.

Oncidium Skinneri. One of the finest of the yellow-flowered species; flowers

large, brilliant golden yellow. S. America. Stove epiphyte. Horticultural Society.

Ouvirandra fenestralis. A very curious stove aquatic, called the Lattice plant, the submersed leaves consisting merely of ribs interlacing so as to resemble lattice work. Madagascar. Rev. Mr. Ellis and Messrs. Veitch.

Passiflora cinnabarina. A graceful climber; flowers pretty, red, with a coronet of yellow threads. New Holland. Greenhouse climbing shrub. Horticultural Society.

Pelargonium Endlicherianum. A handsome novelty, and a great curiosity; flowers large, deep rose. Cape of Good Hope. Greenhouse fleshy-branched shrub. Horticultural Society.

Petunia (var.) *imperialis.* A double flowering Petunia with white blossoms, and of good habit. French Gardens.

Pinus Beardsleyi. } Californian Conifers, forming large handsome evergreen
Pinus Craigiana. } trees, the former exceeding 120 ft. in height. Mr. Murray.

Pinus Griffithii is P. excelsa.

Pinus khasyanus is probably P. sinensis.

Pinus Maderiensis is probably P. canariensis.

Pinus Royleana proves to be P. inops. Noticed last year. Horticultural Society.

Pinus spinulosa is Abies Morinda.

Podocarpus saligna. An ornamental coniferous plant. Messrs. Rollisson and Sons.

Phygelius capensis. A handsome Scrophulariaceous plant, with fine scarlet tubular flowers. Caffraria. Hardy perennial. Messrs. Veitch.

Posoqueria revoluta. A fine shrub, with Laurel-like leaves, and clusters of graceful snow-white flowers. Brazil. Stove evergreen shrub. Messrs. Veitch.

Psychotria leucocephala. A stove plant of great merit, producing superb bouquets of white flowers.

Rhododendron Boothii. Appears to be allied to R. Edgworthii. Bhotan. E. G. Henderson & Son.

Rhododendron californicum. Showy, producing large heads of rosy blossoms. California. Hardy evergreen shrub. Messrs. Veitch.

Rhododendron calophyllum. Somewhat similar to, and discovered with, R. Jenkinsi. Bhotan. E. G. Henderson & Son.

Rhododendron eximium. The foliage clothed beneath like R. Falconeri. Bhotan. E. G. Henderson & Son.

Rhododendron Hookerii. Allied to R. Thomsonii, but distinguishable by the peculiarities of its foliage. Bhotan. E. G. Henderson & Son.

Rhododendron Kendricki. A fine species, having some affinity with R. arboreum. Bhotan. E. G. Henderson & Son.

Rhododendron Keysii. A curious and pretty plant, quite unlike a Rhododendron; flowers Correa-like, orange-red, whitish at the mouth. Bootan. Hardy or half-hardy evergreen shrub. Noticed last year, but had not then bloomed. Mr. Booth.

Rhododendron javanicum album. Similar to R. javanicum; but with white flowers. Java. Cold greenhouse shrub. Messrs. Rollisson & Sons.

Rhododendron retusum. A fine showy plant; neat foliage, and orange scarlet tubular flowers. Java. Cold greenhouse evergreen shrub. Messrs. Rollisson & Sons.

Rhododendron tubiflora. A distinct species with tubular formed flowers, of a pale rosy purple colour. Java. Messrs. Rollisson & Sons.

Rhododendron Windsori leucanthum. A fine dwarf hardy variety of R. Windsori. Bhotan. E. G. Henderson & Son.

Rhopala Jonghei. This and the following are stove shrubs of upright habit, with very ornamental pinnate foliage. This is one of the most striking. S. America. M. de Jonghe.

Rhopala obovata. Very elegant habit. Popayan. M. Linden.

Rhopala organensis. Very ornamental habit. S. America. M. de Jonghe.

Rondeletia anomala. A beautiful stove shrub, with the appearance of a

Bouvardia; flowers vermilion, with a yellow eye. Guatemala. G. U. Skinner, Esq.; Horticultural Society.

Salvia asperata. Herbaceous; flowers creamy yellow. Half hardy perennial. Isaac Anderson, Esq.

Salvia caduacea. Curious and pretty; flowers lilac, curiously fringed. California. Half-hardy perennial. Isaac Anderson, Esq.

Spathodia pentaphylla. A Bignoniaceous plant with yellow blossoms. Raised from seed received from Siberia. Messrs. Rollisson & Sons.

Spathoglottis plicata rosea. An orchid received from Java. Messrs. Rollisson and Sons.

Stylophorum diphyllum. A small Poppy-like plant with yellow flowers. N. America. Half-hardy perennial. Kew Bot. Gard.

Streptocarpus Gardeni. A pretty plant, with the habit of S. Rexii; flowers with a green tube and lilac limb. Natal. Greenhouse perennial. Kew. Bot. Gard.

Streptocarpus polyanthus. Handsome; the leaves few, lying on the ground; the flowers, in a panicle, delicate pale lilac-blue, veined. Natal. Greenhouse perennial. Kew Bot. Gard.

Strophanthus capensis. A greenhouse shrub; flowers yellow, funnel-shaped. Cape of Good Hope. Messrs. Backhouse.

Talinum polyandrum. Pretty, with Oxalis-like rosy flowers. W. Australia. A dwarf annual, related to Calandrinia. Kew Bot. Gard.

Taxus adpressa is the proper name of the shrub known as Cephalotaxus adpressa.

Taxus Lindleyana. A low tree, with long pendulous branches. N. W. America. Mr. Murray.

Tecoma spectabilis. A greenhouse shrub discovered in New Granada. An acquisition. M. Linden.

Tecoma velutina. A fine acquisition for the greenhouse. Horticultural Society.

Thermopsis barbata. A fine herbaceous plant; flowers large pea-like, dull violet purple; shaggy stems. Himalaya. Half-hardy perennial. Glasnevin Bot. Gard.

Thuiopsis dolabrata. A fine hardy pyramidal evergreen tree. Japan. Leyden Bot. Gard.

Thyrsacanthus barlerioides. Handsome; flowers slender, deep crimson, in a close thyrse. Brazil. Stove soft shrub. M. Van Houtte.

Thyrsacanthus Schomburgkianus. A very showy plant, known as *T. rutilans*; flowers rich scarlet. Guiana and New Grenada. Stove soft shrub. M. Linden.

Tigridia violacea. A neat bulbous plant with purple flowers. Mexico. Greenhouse. M. Van Houtte.

Tradescantia Martensiana. A simple white-flowered trailing stove Spider-wort. Mexico. Kew Bot. Gard.

Tropæolum chrysanthum. A graceful plant, with orbicular-triangular leaves, and large yellow blossoms. New Grenada. Stove climber perennial. M. Linden.

Tydæa gigantea. A fine showy plant, raised between *Tydæa Warszewiczii* and *T. (Achimenes) picta;* flowers scarlet and yellow spotted; leaves variegated. M. Van Houtte.

Tydæa Warczewiczii. A handsome soft-stemmed plant, with flowers like *Achimenes picta*, known as *Sciadocalyx Warczewiczii.* (?)

Vaccinium erythrinum. Greenhouse evergreen shrub, of dense and bushy habit, with dark green foliage, the bright crimson flowers produced in bunches at their axils. Volcanic Mountains, Java. Messrs. Rollisson & Sons.

Vanda helveola. Flowers straw colour, tinged with brownish violet on the sepals and petals; lip soft yellow. Java. Stove epiphyte. T. Brocklehurst, Esq.

Viola capillaris. Pretty; flowers blue with a white centre. Chili. Half-hardy perennial. M. Van Houtte.

Weinmannia trichosperma. A handsome foliaged plant of peculiarly light and graceful character. Messrs. Standish & Noble.

Zebrina pendula. A new and unnecessary name for *Cyanotis vittata.*

REVIEWS.

A Popular History of the British Ferns and Allied Plants. By Thomas Moore, F.L.S., Curator of the Chelsea Botanic Garden, Author of the "Handbook of British Ferns," "The Ferns of Great Britain and Ireland, Nature Printed," &c. Second Edition. London: Reeve.

THIS book is one of Mr. Reeve's popular series on subjects of natural history. It was to be expected that a topic of such general interest as the Fern family should form part of such a series; and that, if at all creditably handled, it would find favour with the public, as the appearance of a second edition bears evidence has been the result in each case. It is, in fact, a book such as we can highly recommend, on account of its excellent typography, its beautiful coloured portraits, twenty-two in number, by Fitch, who is without a rival as a botanical artist, and the excellent tone, and very complete manner in which the author has fulfilled his duties. One of the features of the book is a very extensive list of the habitats in which the plants are found in this country; the most complete record of the kind which has as yet appeared, and which we perceive has received much extension in the present edition.

We gather from the preface some intimation of the changes the present issue has undergone. It "will be found to contain notices of the more striking varieties which are now known to occur among the British Ferns. The species which have been added to our flora since the former edition was prepared are now described, and figures of them have been added. The list of localities has moreover received very numerous additions. The author, indeed, has not found space, neither did the design of the book seem to render it desirable, to mention, much less describe, all the variations from the normal form of the species which have been observed—variations of which some of our Ferns have proved very prolific. Those who are desirous of more extended information on this part of the subject are referred to the author's 'Handbook of British Ferns,' and to the text and figures in the 'Ferns of Great Britain and Ireland, Nature-printed.' The search for varieties of the British Ferns has become so unexpectedly successful, that the modifications of form which it is found are assumed by some of the species furnish important evidence against species making—the bane of modern botany."

The text of the volume before us answers to these announcements. There are no unmeaning changes of names, such as disfigure some recent books on the same subject, while the account of the plants is plain and honest, and sufficiently detailed for an elementary book. The figures are admirable. Taken in all its parts this is, we believe, the best book on the subject for a beginner; and we have no hesitation in saying that for those who require a more complete account of these popular plants, the same author's "Handbook" which is accompanied by neat wood engravings of the species, is the most useful and sound. As a splendid contribution to the literature of botanical science, and to that of Ferns in particular, the "Nature-printed Ferns of Great Britain

and Ireland," noticed in our last volume, may be again mentioned, as fully maintaining the high character we have already given it.

Edwards' National Garden Almanack for 1856.

The volume for the new year has just reached us, and it will be strange indeed if it is not found a most useful garden companion for the year. "New Flowers of the Year" afford a great deal of sound and valuable information respecting many seedling florists' flowers and other plants now about to be circulated for the first time. "Carnations and Picotees" will be read with interest by a great many growers of those popular flowers. "Dahlias in Classes" show a better classification of colours than we have before seen attempted, although one or two inaccuracies appear, such as Annie Salter, which is not a *self* flower, but should be in the second division. Descriptive lists of the *new* as well as the best of the old varieties of Hollyhocks are given, and a pleasant gossiping article on "The Pink" that will be cordially welcomed by the Pink grower. We quite agree with Mr. Edwards "that the progress of the Verbena during the past season has been something marvellous," and we are glad to find all the best varieties classified in such a manner as to assist purchasers. New Fruits and Vegetables add their quota of information, although we do not agree with Mr. Edwards that "Celery Turc" and "Incomparable Celery" are identical. A valuable and elaborate descriptive list of new plants is also given, which, by permission of Mr. Edwards, appears in another part of the present number.

With regard to the Directory, it is by far the most complete and comprehensive ever yet put forth. Corrections, even so late as the very recent announcement of a partnership between Messrs. Kennedy and Kempton, of Covent Garden, have been made, and the accuracy of this trade list is the result of great labour and considerable expense. Even the advertising columns, and there are 70 pages of them, form a descriptive list of almost all the new things to be offered this spring for the first time. The "National Garden Almanack" is an exceedingly cheap shilling's worth of information, and we recommend all to ascertain the truth of our assertion.

The Garden Book of Annuals. By William Thompson. Simpkin and Marshall.

The want of such a work as the present has been in some measure anticipated by the copious descriptions which nearly all the leading seedsmen affix to their seed lists of annuals. However, this neat little volume is none the less acceptable on that account. It is just the thing wanted, for there are hundreds of amateurs who are completely in the dark as to the description and cultivation of the charming class of plants of which this work treats. In fact, it records all the information requisite to enable any one to grow any class of annuals as successfully as the best practical gardener, and to keep their gardens gay at a small expense. To make extracts would be superfluous, for the book itself should be in every one's hands who are interested in the culture of annuals.

Rendle's Price Current.

Not long since it was the custom with seedsmen to issue long and uninteresting lists of seeds, merely giving the names only, without further assisting the purchaser by any information respecting them. Mr. Rendle was, we believe, the first to step out of the beaten track, and the "Price Current" has now become a complete garden book, and that, too, of a very pleasing and instructive character. This season it is published uniform with "The Florist," and contains 120 pages of close letterpress, including an almanac, a descriptive catalogue of seeds, in which will be found a mass of very useful information, particularly to those who are not proficients at gardening; some very useful hints on the culture of annuals by Mr. Errington; a monthly calendar of operations that should be carried out in the kitchen garden for the whole year; an article on floriculture by Mr. John Edwards, and information on various other subjects. The "Price Current" is a *multum in parvo* gardening book, and one we heartily commend to the perusal of all who have a garden.

DRYMONIA VILLOSA.

THIS is a rather pretty new Gesneraceous plant, with good sized white flowers stained in the throat with purple, and lined outside the tube with the same colour. It is stated in the "Botanical Magazine" to have been received from Mr. Low, of Clapton, under the above name. It is reported to have been introduced by one of Mr. Van Houtte's collectors from Surinam. It appears a very distinct species, remarkable for the thick woolly coat with which it is covered. It is a sub-herbaceous rather leafy plant, which grows a foot or a foot and a half high.

THE NEW DAHLIAS.

IN compliance with the request made in our last number, we have been favoured with returns from eight gentlemen, who are well-known growers of the Dahlia, and which is the result of their observations made at the principal exhibitions during the last autumn. These lists will be found both interesting and instructive; and, to be more readily understood, they are arranged in a tabular form. There are twenty varieties enumerated, each having their admirers in a more or less degree.

It appears that seven kinds have been returned by each; this alone must place them very high. They must also have been seen pretty frequently to be known by so many growers. Two have been returned by seven, one has six votes, two five; five has two, and four one vote each only.

As to those that are placed highest on the list, Bessie appears to be greatly the favourite, having but one "No. 2" placed against it.

Perfection stands next, having the "No. 1," and placed equal with Bessie in one of the returns. Then follow Mrs. Wheeler, Miss Burdett Coutts, Lollipop, Lord Palmerston, Duchess of Wellington, Yellow Beauty, Grand Sultan, Shaded Model, and Eclipse. Duchess of Wellington and Lord Palmerston should, we think, have stood higher.

We have been urged to give our opinion, but others may object, from the position we hold. The lists are most valuable, and for which we beg to thank our correspondents. We will only add that the new Dahlias of 1855 will be the best lot that has ever been sent out in one season, as it contains several very desirable flowers as regards colour, and many of them are of the most approved form.

Name.	J. Sladden, Esq.,	G. Salisbury Esq.	J. Edwards, Esq.	Rev. C. Fellowes.	Mr. J. Robinson.	Mr. J. Maher.	Mr. R. Hopkins.	Mr. C. T. Perry.	Total.
Bessie	2	1	1	1	1	1	1	1	8
Colonel Wyndham	...	...	...	...	12	12	...	...	2
Corsair	...	...	...	11	...	...	...	...	1
Chameleon	11	...	...	...	10	...	...	...	2
Duchess of Wellington	6	7	5	9	4	7	7	7	8
Eclipse	12	9	10	12	...	...	10	...	5
Grand Sultan	9	3	11	10	...	9	9	9	7
Lollipop	4	6	7	5	3	3	3	3	8
Lord Palmerston	3	...	4	4	8	5	3	4	7
Lord Raglan	...	...	...	...	...	...	...	11	1
Lady Raglan	...	8	...	...	...	...	11	12	2
Mrs. Wheeler	5	2	3	3	5	8	2	10	8
Magnet	...	...	...	...	9	...	...	...	1
Miss Burdett Coutts	7	5	6	2	6	2	5	5	8
Perfection	1	4	1	8	2	4	4	2	8
Princess	...	...	12	...	...	...	12	...	2
Reginald	...	...	9	...	...	...	...	...	1
Shaded Model	10	11	...	7	11	10	...	8	6
Tyrian Prince	...	12	...	...	...	11	...	...	2
Yellow Beauty	8	10	8	6	7	6	6	6	8

As many of our readers will be unacquainted with the colours of the above kinds, we subjoin them.

Bessie, deep yellow
Col. Wyndham, deep rose, with small bronze tip
Corsair, crimson
Chameleon, yellow slightly edged with lake
Duchess of Wellington, pale cream
Eclipse, dark purple maroon
Grand Sultan, dark maroon shaded
Lollipop, salmon buff
Lord Palmerston, common scarlet
Lord Raglan, buff
Lady Raglan, buff
Mrs. Wheeler, deep scarlet
Magnet, white tipped with purple
Miss Burdett Coutts, fawn colour
Perfection, orange
Princess, rose
Reginald, primrose tinged with purple
Shaded Model, orange and buff shaded
Tyrian Prince, dark mulberry
Yellow Beauty, bright yellow

ON DEEP CULTIVATION.

THE importance of deep cultivation cannot be too strongly insisted on. Not that I would advise bringing up to the surface the raw, sour subsoil; where such is the case the bottom spit should be turned up to it, and the subsoil forked over 12 inches deep, leaving it rough at the bottom of the trench; the air will by this get access to it, and some of the fertilising properties of the soil above will be carried down likewise; these will assist in neutralising the crude salts contained in it, and it will in a year or two alter greatly in consequence, and may be mixed by degrees with the other soil. A good plan with such subsoils is to spread over the bottom of the trench, before breaking it up, some fresh slacked lime, which will assist in ameliorating its condition. Land intended for ordinary crops of vegetables, as Cabbage and the Brassica tribe generally, Peas, Beans, Onions, Endive, and many other vegetables, should be free and open to the depth of 24 inches at least, for on examining the roots of the above when in a growing state they will be found to extend downwards that depth; and a good depth of soil not only increases the luxuriance of crop by enlarging the pasturage for their roots, but to a certain extent a preventive to drought, directly and indirectly; the former by allowing the roots to penetrate to a greater depth than in ordinary soils, it is well known; and likewise that the more open and porous a soil is, the greater its power of capillary attraction, whereby moisture is more readily drawn upwards when the surface soil becomes dry; and as the number of fibrous roots of any plant are much increased in open soils, the chances of a plant suffering from a dry season is materially guarded against.

Another advantage is, that by frequently trenching to a good depth a change of surface soil is often effected, the benefit of which to crops of the same kind which have quickly to succeed each other can hardly be overstated. I have indeed grown a crop of Potatoes by this means for 25 consecutive years on the same piece of ground without the crop diminishing or the crop being affected. This, I admit, is a bad practice, but I name it to show what may be done by trenching and changing the seed, which I did every year.

For such vegetables as Rhubarb, Seakale, Asparagus, &c., the land can hardly be too deep, nor yet, I may add, too rich. It should be a point, where these have to be planted, to trench the ground more than once and to well mix throughout the whole mass of soil a good mixture of the best dung you can command. The putting in dung in layers for this purpose, as is often seen, is a bad method; the dung should be well incorporated with the soil, which it helps to keep open, and admits the free passage of water and air through the soil. This preparation is likewise necessary for Strawberries, Raspberries, and the like.

CULTOR.

CALENDAR FOR THE MONTH.

Auriculas.—The Auricula is not a very interesting plant at this season of the year, being almost devoid of foliage. Neither should they be excited to grow before February, when they may be watered more freely—at present they should have very little water. The old foliage will continue gradually to decay, and should be removed as fast as the leaves turn yellow. This should be done with care, not to injure the plant. Give them a slight protection during severe frost.

Camellias and Azaleas.—Camellias coming into bloom will be benefited by a watering of liquid manure once or twice a week, and when fires are required they ought to be occasionally syringed. Large Azaleas not intended to flower until May will only require careful attention in watering, and a steady temperature. Young plants will require to be kept a little warmer as they begin to grow.

Carnations and Picotees.—The cold we have already had, and are still likely to experience, will not injure these plants if they have been kept dry, as recommended in previous numbers. The same treatment may continue during the present month.

Cinerarias.—These plants will have attained a good size by this time, and must have corresponding room to keep them dwarf, and they will now grow still more rapidly. Green-fly must be looked after and kept down. The Cineraria flourishes best in a pit, which should be heated with hot water, however slightly. The plants should be raised near the glass. Towards the end of the month, tie out the side shoots. This is done in a similar manner to that adopted for the Pelargonium when young—namely, by placing a strong piece of bass round the pot underneath the rim, to which the outer shoots are tied—by this means a dwarf bush is obtained.

Cold Frames.—In mild weather give all the air possible, pulling off the light on dry and sunny days. But little, if any, water, will be required. Be always prepared to protect from frost, by coverings of some description, by night.

Conservatory and Show House.—Keep up a temperature of 45° by night and 55° by day, allowing it to rise a few degrees by sunheat. When the weather admits give a little air, but be careful of cold draughts, as this house ought now to be gay with Indian Azaleas, Camellias, Heaths, Epacrises, Tulips, Narcissus, Hyacinths, Amaryllis, Primulas, and of such stove plants as Epiphyllums, Poinsettias, Aphelandras, Euphorbias, Justicias, Bletias, and such.

Cucumbers.—Plants in bearing must be carefully attended to. At this season of the year they should be trained to a trellis, and as near the light as possible, without allowing the foliage to touch the glass. Never allow the plants to carry too many fruit on at one time. Keep a bottom heat of from 80 to 90 degrees, and see that it neither rises above nor falls much below this point; much depends on this, for no matter how well treated in other respects, if a steady bottom heat is not regularly maintained, the growth of the plants will be anything but satisfactory. Keep the temperature about 65 degrees by night and

70 degrees by day, in severe weather, and in mild weather a few degrees higher, always allowing it to rise ten degrees or so more by sunheat. Maintain a moist growing atmosphere. Give air freely every day, but avoid cold draughts. Water but sparingly, at the same time do not let them suffer for want of it. Do not let the shoots get crowded; rather have them too thin if anything. Sow for a spring crop, and place them in good bottom heat, and as near the light as possible.

Dahlias.—It will be necessary to carefully examine the roots, particularly those from the ground, to see they are not decaying at the crown. If they appear to be rotting downwards, put them to work in heat, or they may be entirely lost. It is best and most secure to grow a few pot roots, as they are termed—roots from plants that have been kept in pots. These will keep sound longer than those from the open ground, particularly if the latter have been grown freely, in rich soil, causing them to have large, hollow stems. These pot roots are also best adapted for transmission to a distance, and, if not required to be used to produce cuttings for the purpose of propagation, they make excellent strong early plants, by starting them in gentle heat early in April.

Flower Garden.—At this season of the year keep lawns, walks, &c., as clean and orderly as possible. Tender Roses and other tender plants should be protected from frost. Protect bulbs, &c

Forcing Hardy Shrubs.—A mild steady bottom heat, a temperature of from 50 to 60 degrees, with a rise of 10 or 15 degrees by sunheat, and syringing morning and evening with warm water, will ensure success here. As soon as the plants in bloom are removed to the conservatory and show house, fill up with fresh plants. Introduce Kalmias, Rhododendrons, Azaleas, Deutzias, Lilacs, and Roses.

Forcing Ground.—Prepare beds for Asparagus to succeed former crops. Keep the roots near the glass, and on fine days pull the lights off occasionally; the buds will, by this means, acquire more of their natural flavour and colour than they otherwise would. Cover Seakale and Rhubarb roots with pots, and then cover with sufficient fermenting material to cause a heat of about 80 degrees. But a better plan is to make a bed of fermenting materials and put the roots in it, and exclude the light; or they may be forced under trellis in a Vinery or Peach house. Bring Ash-leaved Kidney Potatoes forward in pots and boxes, to be planted out in pits or beds when ready for them. Put roots of Tarragon and Mint into one of the hotbeds. Sow Mustard and Cress once or twice a week, according to the consumption. Sow Early Horn Carrot in a slight hotbed; also some Radishes. Have always in readiness a good heap of fermenting materials; if the weather suddenly becomes very cold you will then be able to keep up the heat in any of the pits where it may be declining.

Fruit, Hardy.—Without pretending to be weather prophets, we may, from present appearances, expect severe weather the early part of January. If this should be so, see that the wood of Fig trees is well wrapped up with straw or Fern. If the weather is open, all kinds of hardy fruit trees may be planted. Pruning may also be proceeded with in open weather. Espaliers also may be tied, and wall trees nailed. Not a moment in fine weather should be lost in prosecuting such work.

Greenhouse: Hard Wooded Plants.—The chief work in this house is careful attention to giving air and watering, and proper attention to fires where they are rendered necessary by severe frosty weather. In frosty weather a night temperature of 40° is quite sufficient. Give all the air possible in mild weather. Be careful in watering, but do not let anything suffer for want of it. *Soft Wooded Plants.*—No time should be lost in pruning and repotting Fuchsias, if they are intended to be large plants. Young plants should be potted and put into a moist genial atmosphere of from 45 to 55 degrees artificial heat. Pelargoniums require considerable attention at this season. Large plants will require tying out; remove all dead leaves, and those small ones at bottoms of the shoots; the air by this means circulates more freely through them. Plants that require it should be shifted into larger pots forthwith; keep them close for a short time, but ventilate freely afterwards, always avoiding cold draughts. Water carefully, but do not let them want it. Watch for insects, and fumigate. Keep up a temperature of from 45 to 50 degrees. A similar treatment will suit fancy Pelargoniums, only they will do with little warmer temperature.

Hollyhocks.—Roots potted up from the ground in autumn, for the purpose of producing cuttings, may be excited with a little heat; it should, however, be very gentle at first. When they have pushed shoots to about three inches long cut them off, similar to the method adopted in propagating the Dahlia. The cuttings should be put into thumb pots, using sandy soil, and placed in mild bottom heat. The plants struck now will flower well in September. Seed sown in heat, and the plants grown under glass till late in May, will flower in the autumn.

Kitchen Garden. – Drain, trench, manure, and dig vacant ground when the weather permits. Where not done already, throw up into rough ridges vacant ground. Plant Box edgings. In frosty weather push forward all work connected with the wheelbarrow. Place heaps of manure on spots where it can be made available for dressing those quarters that are soon to become vacant. Prepare composts and manures; also Pea sticks and other sticks requisite for kitchen garden purposes. Prepare labels for naming vegetables. There are innumerable little jobs that may be done under cover in severe weather that are as necessary as some of apparently greater importance. Protect Cauliflower plants, Lettuce, and Parsley in frosty weather; Artichokes, if not already done, should have a good mulching of half rotten leaves. Before severe weather take up some Turnips; top and house them. Take up some Horseradish and house it. Broccoli showing flower (which Snow's, if *true*, will), take up with a ball, and put in a shed or other place of shelter. Sow a crop of early Peas and Broad Beans on a warm sheltered border. Sow also some Radishes and Horn Carrot, and cover with litter in frosty weather.

Melons.—Most people have their favourite sorts of these. For an early crop, sow at the beginning of the month some of the scarlet-fleshed kinds; many of these are of a much hardier nature than the green fleshed sorts: they set their fruit more freely, and do not require so high a temperature; but they all require a good steady bottom heat.

Towards the end of the month, sow the green fleshed kinds, to succeed the others, and place them in a good bottom-heat. The following is a very safe way of raising young plants:—Get some 60-sized pots, fill them about a third full with soil, and put one seed in each pot. When the young plants make their appearance, get some soil and keep it in the house, so that it may be always warm; with this daily earth up the young plants. At this season of the year we find this plan much better than sowing several seeds in a pot, and when up dividing them to pot.

Orchard House.—All fruit trees in pots and tubs intended for the house should be got in without any loss of time. Put a good covering of dry leaves, straw, or fern round the pots and tubs, to keep the frost from the roots in severe weather. In open weather, give all the air possible.

Pansies.—If the weather should be mild and open towards the end of the month, those for blooming in pots should be repotted. For this purpose, keep the soil dry and in readiness.

Peach House.—In severe weather, hard forcing must be avoided with everything, but more particularly with Peach trees. Do not hurry them on any account: a crop is often lost by this error. Light is a most essential agent in all stages of its culture; and when forced, it must be flowered under a comparatively low temperature. If any of the roots are in borders outside, see that they are covered from the frost. The borders inside should have a good soaking of water when forcing commences; they will then require but little until the leaf is fully expanded, when they will require to be supplied liberally, if the trees are large and healthy. Begin with a temperature of 40°, then raise to 45°, afterwards to 55°, which ought not to be exceeded till the fruit is set—after the fruit is set, raise the temperature to 60°, this will be sufficient until the stoning is over. Then raise it to 65° and 70°. This is the amount of artificial heat aimed at in a general way, but the weather will often cause wide departure from it. If the weather be bright, mild, and sunny, when forcing is commenced, little artificial heat is necessary; and if severe and frosty, the above standard will be a safe guide—a moist atmosphere should be kept up, excepting the time of flowering. Air should be given freely, and as early in the day as the weather will permit. Trees in flower will require all the air possible, and a steady night temperature of about 50°. Trees not in flower should be syringed with tepid water three or four times daily.

Pelargoniums.—Young stock will require but little labour during this month; but the large plants, either grown specimens or those intended to make exhibition plants, should now be tied out with neat small willow sticks. The method of doing this has frequently been detailed in the *Florist*. All the stock should be kept comfortably warm and tolerably dry; they should not be excited to grow till next month. Fancy varieties, however, may be helped along with a little more fire heat than is judicious for the large kinds.

Pinery.—A steady bottom heat is indispensable here; they must not be kept too hot one day and too cold another—one regular heat of about 85°. Plants in fruit will require a dry temperature of about

75°, which may be allowed to rise by sun heat to 85° and 90°: they will also require a moist atmosphere. Plants in flower will require a dry atmosphere. Plants intended to fruit during the autumn must be kept steadily growing. Water plants in fruit—give air daily. Keep young plants of all descriptions in a moderate temperature—do not attempt to push them too fast into growth, and don't allow them by any means to receive any sudden checks.

Pinks.—But little will have to be done this month. If the frost should loosen the plants, press them firmly in the ground after a thaw.

Pleasure Ground and Shrubbery.—Should the weather prove favourable all kinds of shrubs should be planted without delay. Put a dressing of manure or leaves round all new planted trees, to keep frost from the roots. After snow storms be careful to have the snow shook off all evergreen trees and shrubs; we have often seen a fine specimen disfigured through neglect in this respect; the weight of snow breaks the branches. In mild open weather proceed without delay in pushing forward trenching, digging, and alterations of every kind.

Stove.—Plants in growth will require careful attention. Cut back Clerodendrons, Allamandas, Justicias, &c; remove some of the old soil and carefully repot them. Bring on a few Achimenes, Gloxinias, and Gesneras. Give air daily if possible, but avoid cold draught near growing plants. Keep up a temperature of from 55 to 65 degrees artificial heat. Water sparingly until the plants grow freely.

Strawberries.—Put a batch of plants into the Peach-house or Vinery; place them on a shelf near the glass, where they can have plenty of light and air. When the fruit is set, they should be removed to a warmer place. To keep up a succession, a fresh supply of plants must be introduced every fortnight. The temperature should at first be low, and be raised gradually. Plants in flower should have all the air possible, otherwise they go blind. Fumigate for green-fly.

Vinery.—Vines in action require careful attention; those in bloom need much care. A dry night temperature of 65° for Hamburghs, and 70° for Muscats, will make them set well. With sun heat it might rise 10° or 15° more. If the roots are in a border outside, not only must the frost be kept from them, but a steady heat of about 70° must be kept up, if not from hot water pipes below, from fermenting materials from above. Inside borders should be well watered. Tie down shoots, stop laterals, and thin directly the berries are formed. Begin Vines just started with a moist, genial atmosphere of 45° artificial heat, and increase 10° or 15° in a month, always allowing a rise of 10° or 15° by sun heat.

During the frosty weather the florist should have a general examination of his stock of things necessary to the exhibitor. Travelling boxes in time require repairing and painting. Exhibition stands should be repainted annually and varnished. Then come shades, glasses, stakes, cards, and Carnation pins, not one of which, after a season's use, but will require looking over, to be put in order, that they may be taken from the store and used at a moment's notice, when the time arrives; and as there should be a place for everything, let everything be put away in its proper place.

Grapes.
Stockwood Golden Hambro
(Bushy.)

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THE STOCKWOOD GOLDEN HAMBURGH GRAPE.

(PLATE 110.)

WE are indebted to Mr. Busby, gardener to J. Crawley. Esq., Stockwood Park, Beds, for having raised from seed this valuable acquisition to our list of really useful Grapes. Its immediate parent, we understand, was the Black Hamburgh, some blooms of which Mr. Busby fertilised with pollen from the Dutch Sweetwater, and the result produced has been the hybrid in question, which approximates to the Hamburgh both in size of bunch and shape, and also in size of berry, but instead of being black it is of a white colour, which merges into a rich amber as the berries attain full maturity. Our plate, by Mr. Andrews, so well represents the appearance of Mr. Busby's Grape that we need not more particularly notice it in this respect. The flesh is moderately firm, with a cool refreshing juice, slightly vinous, more so than either the Sweetwater or the Muscadine, but in this respect inferior to the Hamburgh. As our plate attests, it is a very handsome showy Grape as regards both bunch and berry, and we are informed that it sets freely, forming a well filled up bunch, and that the Vine has a vigorous habit of growth—two excellent qualifications for a forcing Grape. The Sweetwater and Muscadine, the only two white Grapes we had which would bear forcing with the Hamburgh, are both very inferior to that variety as regards productiveness and appearance, and therefore a white Grape equal to that deservedly popular kind was much desired. Mr. Busby's Grape ripens with the Hamburgh, and we therefore think he has supplied us with the desideratum we have been so long seeking for. The berries, he tells us, never burst, and the footstalks are not liable either to shrivel or shank. He also adds that it is very hardy in constitution—so much so, indeed, that it will succeed even in a greenhouse.

For particulars respecting its sale we must refer our readers to Messrs. Veitch and Son's advertisement in another page of our present number.

THE HORTICULTURAL SOCIETY OF LONDON.

THE scheme now proposed for the continuation of this Society holds out, in my humble opinion, no probable hope of success. It is the old story over again—a mighty parade of scientific principles, and the vaguest of all possible hints as to the practical means by which our downward progress is to be arrested. The Horticultural Society can be maintained in a state of efficiency only by a thorough re-organisation of its Executive. We must have not only "new men," but "new measures." Old prejudices must be scattered to the winds—obsolete customs resolutely ignored; and then—but not till then—we may look for the full development of those elements of greatness which are still inherent in the Institution, fallen and degraded though it be.

"Even in its ashes live its wonted fires."

Let me make myself a little more catholic, and put away, as a worn-out garment, all those antique, stiff, and constrained notions, which are as unsuited to modern plant-growing as they are objectionable to modern plant-growers. I assert—and can adduce ample proof of my assertion—that Horticultural exhibitions (in other words, flower-shows) are as popular as ever. How comes it, then, that so noble an institution as the Horticultural Society of London is at this moment tottering to its fall? "I pause for a reply." In the mean while, let me offer a few suggestions, the adoption of which would, I believe, again place our Society at the head of similar institutions.

In the first place, I would increase the number of our Executive. The Council at present is composed of fifteen members, from whom are elected a President, Vice-President, Treasurer, and Secretary. These fifteen consist, for the most part, of noblemen and gentlemen more noted for their high position in society than for any practical knowledge of gardening, or any peculiar interest in gardening pursuits. Let the fifteen be increased to thirty-six, retaining, by all means, the noblemen and gentlemen as heretofore, with the addition of (say) seven exhibiting amateurs, seven exhibiting nurserymen, and the like number of gentlemen's gardeners, all exhibitors. Thus, while the "upper" fifteen might continue to rule the financial department, the "practical" twenty-one could watch over the general interests of exhibitors, the neglect of whom has been one chief, if not sole, cause of the present sad state of the Society's affairs.

With respect to the privileges of Fellows—although, in truth, they have not of late years been of much importance—I would again introduce the system of popular extension. Give to each existing life Fellow the right of *entree* for himself and *three* (or *four*) friends to every meeting, exhibition, &c. Institute (as now proposed) a new class of Fellows, who, on payment of two guineas each annually, shall be entitled to all the privileges of existing Fellows, save that their right of introduction shall be available for *one* (or *two*) friends only. From the adoption of this course I should anticipate the greatest advantages, inasmuch, as the power of introducing friends would assuredly lead to

the enrolment of many new Fellows, who, in the course of time, would bring us *their* friends, by which means our ranks would soon be crowded with recruits. I would do away *at once* with the objectionable rule, that the persons introduced must be "maids, wives, or widows," &c., residing *in* the houses of Fellows! Let a Fellow freely pay his subscription, and *as freely* "do what he pleases with his own" purchased rights and privileges. Continue to give Fellows the option of purchasing tickets at a reduced price; but abandon the troublesome formula which, up to the present time, has had the effect of a "prohibitory duty."

Judging from the annual subscriptions received for the three years 1852-3, 1853-4, and 1854-5, I make an average of about 2500*l.*, which gives us some few less than 600 paying members! Are we to conclude that a country at the head of scientific horticulture, as Old England is universally admitted to be, cannot number more than 600 paying admirers? The question is too absurd to call for a serious reply. And yet it needs no prophet's eye to see that even this limited number will soon be sorely reduced, if the affairs of the Society and its management be not immediately thrown widely open, and some important restrictions made in the cost of conducting its business. I am told that one office-bearer receives 500*l.* annually for his services. If this be true, is not the amount excessive? and, under existing circumstances, would it not be advisable to reduce that amount?

Apply the pruning-knife freely in all directions, and our annual expenditure might be soon reduced to about half the sum at which it has stood for some years, and this might be effected without impairing the usefulness or jeopardising the stability of the Society. On the contrary, vigorous measures of this kind would soon place large sums at the command of the new administration; present liabilities would be gradually liquidated, and the Council enabled to put forth more liberal schedules of prizes at future exhibitions, which may, even yet, become as productive of revenue as at any period of the Society's existence, even though they be held at the Chiswick Gardens—a place above all others suitable for grand metropolitan horticultural fêtes. To effect this, however, all the present restraint and mystification must be removed, a result which can only be brought about by the exertions of a numerous and practical Council, composed in the way I suggested at the commencement of this paper.

I look upon the destruction of our fine old institution as a foul and indelible blot upon Horticulture. Even the scheme just proposed for our consideration tells too plainly that its framers, even if they possess the *will*, are ignorant of the *way* to redeem our fallen fortunes. The vessel must be newly manned if we hope to escape the shoals and quicksands among which she has been steered, and from which her pilots are unable to extricate her.

The present visionary scheme includes the holding of "London exhibitions yearly, during the spring and autumn," in "some spacious place to be hired for the purpose;" it further proposes "that monthly meetings be held as heretofore, in Regent-street, &c.; but that MEDALS AT THOSE MEETINGS BE DISCONTINUED." May I be permitted to enquire, in all simplicity, if our exhibitions have been distasteful to

exhibitors for lack of remunerative prizes, what are we to expect from that quarter when the *usual medals* are withheld? Flower shows without prizes! In the name of wonder what next?

I cannot quit my ungracious subject without inviting particular attention to some FACTS connected with the financial department of the Society. Any one who possesses the least experience in the getting up of flower shows will at once perceive that the expenses of the exhibitions have been, to use a mild term, enormous; and that large sums have been lavished in this manner which ought, in common justice, to have been available for increasing the value of the medals awarded to the toiling exhibitors.

COMPARISON OF THE COST OF EXBIBITIONS

IN THE YEARS 1852, 1853, AND 1854.

EXPENSE OF EXHIBITIONS.	1852.	1853.	1854.	Total.	AVERAGE PER SHOW.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Miscellaneous timber	18 7 7	9 11 10	40 6 1	68 5 6	
„ repairs	45 13 4	30 2 0	13 12 10	99 8 2	
Carpenters, painters, tent-pitchers, &c.	140 2 5	118 2 3	124 12 4	382 17 0	42 11 0
Labour beyond service of garden	72 13 8	77 17 0	61 6 0	211 16 8	23 10 9
Miscellaneous printing	59 17 4	56 9 0	66 2 6	182 6 10	
Admission tickets	25 7 0	23 5 0	23 2 6	71 14 6	
Advertisements	119 1 0	104 1 6	87 6 0	310 8 6	34 9 10
Judges	31 10 0	34 13 0	24 3 0	90 6 0	
Extra clerks and temporary rooms	24 0 0	28 11 6	33 6 0	85 17 6	
Police	71 12 0	76 13 0	61 15 0	210 0 0	23 0 0
Bands and all music expenses	270 0 0	270 10 0	270 0 0	810 10 0	
Provisions for exhibitors, police, &c.	56 16 10	61 13 7	60 3 11	178 14 4	
Watering roads	15 15 0	10 10 0	11 12 6	47 17 6	
Miscellaneous stationery, postages, &c.	41 4 8	40 19 3	43 4 4	125 8 3	13 18 8
Cost of new tents	32 0 0	—	—	32 0 0	
Green baize for tables	5 0 0	—	—	5 0 0	
Extra on Her Majesty's visit	—	—	18 5 6	18 5 6	
	1029 0 10	942 16 11	938 18 6	2910 16 3	323 8 5
Medals awarded	1227 0 0	975 10 0	967 10 0	3170 0 0	352 4 5
Total	2256 0 10	1918 6 11	1906 8 6	6080 16 3	675 12 10

The foregoing table shows that while the average of the awards made to exhibitors for the nine exhibitions held during the three years above named was 352*l.* 4*s.* 5*d.*, the expenses paid during the same period for "getting up the shows" were no less than 323*l.* 8*s.* 5*d.* for each exhibition!—a sum out of all conscience disproportionate, and, to my mind, wofully extravagant. Take the simple item of advertisements, involving an outlay of 310*l* 8*s.* 6*d.* for the three years, or an average of 34*l.* 9*s.* 10*d.* per show. Printing alone has cost more than 28*l.* for

each show. Under the head of "Miscellaneous labour beyond the ordinary service of garden," I find a charge of 211*l.* 16*s.* 8*d.*, or 23*l.* 10*s.* 9*d.* per show—the wages of nearly 100 workmen for the day at labour prices, *beyond which*, there are the heavy items for carpenters, painters, tent-pitchers, timber, and repairs, amounting to 550*l.* 10*s.* 8*d.*, or 61*l.* 3*s.* 4*d.* per show. Prodigious! 23*l.* per show represents the cost of "Police," and every other charge is in proportion—I ought to have said out of all proportion. It is useless to analyse the expenditure more closely. The figures (with the exception of the averages) are not mine. I have simply copied them from the latest published accounts of the Society; they tell their own tale, and a very pretty state of affairs they, to my thinking, unfold.

In the "National Garden Almanack," just issued, I have given expression to my honest and candid conviction relative to the discourteous treatment exhibitors have received from the Society; and I hold, the letter published in the *Gardeners' Chronicle* of Jan. 12th, signed "F. H. S.," to be under a veil too thin for us not to receive it as emanating from a spirit closely allied to those who have so long held paramount power—and used it too—against exhibitors. I fear that all hope of change must be considered as past.

JOHN EDWARDS.

Wace Cottage, Holloway, Jan. 18.

IN the *Gardeners' Chronicle* of January 12th, there appeared a letter from an old Fellow of the Horticultural Society of "thirty-five years' standing," on the present crisis in the affairs of the Society, well calculated, I think, to cause the Council to exclaim "Save us from our friends." The object of "F. H. S.," the writer, appears to be threefold: first, to proclaim his own foresight, as he says he always felt the maintenance of the Garden to be beyond the Society's strength, and he has always refused to support it; secondly, to express his "joy at the present crisis in the affairs of the Society, because the proposals of the Council are rational, and better calculated to promote gardening than a costly garden and public shows;" and thirdly, to throw a little dirt in a sly manner at the exhibitors, saying that the shows "have degenerated into something very like a race-course, for people will no longer exhibit for honour or the sake of horticulture only, but purely and simply for the money they can make." But, alas! his joy is but short-lived, for he states, in a subsequent part of his letter, that the ("rational") propositions of the Council embrace the continuance of the shows, only changing their ground; this, he says, is very wrong, and recommends the Council to leave these (degenerated) shows to their "friends" in the Regent's Park and at Sydenham, but, with singular inconsistency, he admits that the shows, which he stigmatises as degenerate, "have been carried to a pitch of perfection the like of

which the world never saw—the one at Gore House (the last he saw) surpassing all others" (does he mean in its resemblance to a race-course?); and he winds up the letter with saying that he and his friends are willing—and he hopes the Fellows generally will be so too—to subscribe funds to put the Council so nicely at their ease that they may think of something else than the readiest way of providing ways and means. Don't they wish he may do it? But, seriously, it is an unmerited insult to the exhibitors generally to say that the shows have degenerated. The Society has for many years reaped a considerable revenue from the shows, whilst the exhibitors have rarely received in prizes enough to cover the expenses of carriage, to say nothing of the expenses of cultivation; and as a large number of exhibitors are nurserymen, whose legitimate object is business and profit, it is very irrational to upbraid them for requiring that some portion of the money they work hard to gain should reach their pockets. If "F. H. S." is the best advocate and adviser the Council have in this their time of difficulty may they not well say "Save us from our friends?"

The decline in the attendance at the shows dates from the time, and has gradually increased since, the unwise conduct of the Executive in refusing any encouragement to seedlings and florists' flowers, which were always much more attractive to the company than plants of greater pretensions; in confirmation of this, it is only needful to remark that, generally, the splendid plants of Ericæ failed to gain more than a passing glance, because the same plants were so constantly seen at all the shows; but it was not so with the seedlings and florists' flowers: they always attracted attention from a large number of the visitors, and, in a commercial point of view, they were generally the most valuable plants in the show.

What the decision of the Council may be for the future I know not, and whether the garden at Chiswick should be abandoned or not I don't feel disposed to give an opinion; but if they continue to hold the shows, I would urge the Council to adopt a course that will secure the widest support, by making the shows attractive as well as splendid, encouraging seedlings and new flowers of all kinds; and I shall be glad to see at all the Metropolitan shows a more extended encouragement given to florists' flowers and seedlings; the expense is trifling, whilst the number interested in them is great.

FLORIST.

LIGHT: ITS INFLUENCE ON VEGETATION.

How wonderful is the contemplation of the mysterious agency of light on the surface of the globe! And while its effects are everywhere evident, how little do we know of the principle by which, unseen, such mighty changes are effected through its influence on organic life! Man,

with the countless thousands of the animal kingdom, which, before and since his creation, have occupied the earth's surface, have been, and are, still dependent on this subtile agency for their very existence.

I purpose noticing shortly its effects on plants. When first the Almighty fiat went forth—"Let there be light," the earth, a mere chaos before, began gradually to assume the garb of beauty; a tiny vegetation crept o'er those rocks of granite, which emerging from that primeval ocean, gave first evidence of a condition necessary to support vegetable life. How long the reign of Mosses, Lichens, &c.—of those races whose highest organisation was a simple cell—lasted, is beyond the sphere of investigation; under the influence of light they performed their allotted part, and as race after race died away, and left their remains on the rock on which they grew, a thin coating of vegetable matter would be formed, which, mixing with the disintegrated portions of the rock beneath, in the course of time produced a depth of soil capable of supporting a larger race of plants. The war of organic life on inorganic matter had, in fact commenced; and from that far distant time to the present, through all the various phases of the earth's existence, *light* has been the motive power—the invisible mainspring—which set in action the first principles of organic matter, and, as an instrument in the Creator's hands, has brought to perfection, and continued to the present time, the various races of the animal and vegetable kingdoms which have spread themselves over the earth.

We have no evidence by the examination of the fossil remains of the earliest vegetation, that a progressive advancement from a lower to a higher class of plants took place in any regular order—the inference is rather to the contrary; and, in all probability, successive races of plants (as with animals), were brought into existence as the conditions necessary to insure them full development became ready for their reception. Each change of sea bottom to dry land would find the latter perhaps better able to support vegetation as marine life became more abundant; and as larger races of plants came into existence they would assist more materially, by their roots penetrating the rocky subsoil, its decomposition. Whatever may have been the kind of plants which replaced the earliest forms of vegetable life, the knowledge of the Flora of the coal formation is sufficient to show us, that at that period a luxuriant vegetation was spread over vast areas of the earth's surface, embracing a great variety of species—some of them differing widely, while others are nearly identical with the races now living. This state of things must have continued for a period beyond the power of calculation, judging from the number of submerged forests which now form our coal-fields, and which show a succession of vegetation on the same spot which must have occurred at intervals of time of great extent between. It has been argued that, at the period in question, the conditions for promoting a luxuriant vegetation were in greater abundance—that the atmosphere was charged with a far greater per centage of carbonic acid—and that the splendour of the vegetation of that day, when Mosses assumed the port of lofty trees, must have been owing to this circumstance. There is no reason whatever for assuming such to

have been the case; all analogy is against such a theory. The peculiar constitution of plants, as well as of the atmosphere, must have been different; and experiments made to show whether plants could decompose a larger amount of carbonic acid, if the atmosphere contained it, inform us that such is not the case. We must therefore refer the peculiar vegetation of that period to climatal influences, favoured perhaps with a tropical sun and abundance of light; for we can hardly reconcile the close approach to tropical forms, among the Flora of the coal period, with a climate similar to what exists on the same spot at the present. Passing onwards, we find, subsequently, remains of vegetation differing from those of the period just noticed, and by degrees approximating in form and character towards those of the present time.

This short epitome of vegetable history I have thought necessary, to connect the chain of evidence in respect to the influence that light has exercised, through all time, in changing and modifying the aspect of external nature.

That light has great influence in deciding the colour of both plants and animals, is well known. In tropical climates, under the effects of a brilliant sun, vegetation assumes her darkest and richest green; flowers and fruits are tinged with colours of the deepest dye. In temperate climates, plants present a more subdued colour, and we miss the gaudy colours of the flowers of tropical regions: while, farther north, there is but little colour in the flowers, and the subdued forms of vegetable life show how much they miss the invigorating stimulant of light. So it is with plants cultivated under glass, freely exposed to even the light of an English climate; they will show, by the greenness of their foliage and bright colour of their flowers, how congenial light is to their welfare: on the other hand, when grown in dark, badly-constructed houses, the sickly foliage and drawn-up stems show the want of this necessary element. I shall, however, reserve what I have to say on this to the conclusion of my paper.

The green colour in plants is dependent on the presence of a peculiar matter formed in the leaves of plants, called chlorophylle, and which is the result of the action of the sun's rays on the leaves. This chlorophylle is a carbonaceous compound, and no doubt it serves important purposes in the process of assimilation. The sun's rays, as they fall on the surface of the earth, possess very different properties, and these may be separated, so as to be made to act independently of each other. These properties and principles are represented by the red, yellow, and blue colours of the prismatic spectrum, and which respectively represent the caloric or heating rays, the luminous rays, and the actinic or chemical rays; each, as I shall show hereafter, have their allotted sphere of duty in reference to promoting vegetation.

The influence of light on vegetation, in promoting the decomposition of carbonic acid, contained at all times in atmospheric air, is well known, and will be noticed more at length hereafter, as I purpose ending this paper by again adverting to the influences of the three principles found in the sun's rays on vegetation.

Writers on the subject inform us, that the *actinic* or chemical rays

are as essentially necessary to the germination and early growth of plants as the *luminous* rays are, at a further stage of their progress, to enable them to decompose carbonic acid, and assimilate the carbon for their use; and that neither *actinism* nor the *luminous* principle are of themselves sufficient to perfect the growth of plants, or to induce the power of reproduction, which is mainly effected by the *caloric* or heating rays, these latter having a tendency to produce that change in the plant's system which ends in the production of flowers and fruit.

In reference to this, one of the most scientific writers of the present day says:—"Observations which have extended over many years, prove that with the seasons the solar powers are, relatively to each other, subject to an interesting change. In the spring, the *actinic* power prevails, and during this period its agency is required for the development of the germ. As the summer comes on, the actinic rays diminish, and those of light increase. We see the necessity for this, since luminous power is required for the secretion of carbon, with which the woody fibre is formed, and also the proximate principles of the plant. Autumn, the season of fruit, is characterised by an increase of the heat rays and a diminution of the others; this change being necessary, as science now teaches us, for the production of flowers and fruit."—*Poetry of Science, by Robert Hunt. 2nd ed.*

Much as I admire the writer, I have doubts whether this attempt at generalising the phenomena alluded to is altogether correct. In fact, the forcing of flowers and fruits, whereby the blooming of plants and ripening of fruits takes place at seasons the opposite of that in which they occur when not subjected to artificial treatment, goes to prove, either that the separate offices or powers of the three principles—the *chemical, luminous,* and *heating*—on vegetation, at different stages of the plant's growth, are over-rated; or, that plants themselves, at any season, according to their period of growth, exercise an influence in inducing a preponderating power in those rays which at the time are essential for the due fulfilment of their functions. This power may be reciprocal, according to the age of the plant, or rather, in accordance with its secreting power; for no doubt can be entertained, but that the power of assimilation changes with the age of the organ by whose agency it is effected. On what principle besides are we to account for the ripening of Grapes in March, or Peaches in April, or the blooming of Roses and Pelargoniums in February, and numerous other instances, familiar to every gardener?

J. S.

(To be continued.)

NEW FRUIT-BEARING SHRUB.—EUGENIA UGNI.

THIS new and valuable fruit-bearing evergreen shrub is of the Myrtle family, and belongs to a genus of plants named "Eugenia" in honour of Prince Eugéne of Savoy. This variety has been recently introduced by Mr. Veitch, of the Exotic Nursery, Chelsea, and was obtained through Mr. Lobb, from Patagonia.

The fruit is said to be much used there by the natives as food, and eaten in Chili as dessert, which statement no one would doubt if once having ate of the fruit. It is of the most exquisite flavour, and difficult to describe. The pulp is soft and white, very sweet, and has a Strawberry flavour, combined with sweet spices, and extremely aromatic. The fruit is round, of a brownish red colour, flat eye, and small reflexed segments. The stalk is like that of a Gooseberry, and hangs on the tree in a similar manner.

The plants are increased by cuttings or from seed, and will grow freely in rich loam, and if kept in a greenhouse it will blossom in the spring and ripen its fruit early in the autumn. Small plants in pots bear well, and form very pleasing objects with their dark green polished leaves studded with ruddy fruit.

Doubtless we have something yet to learn in regard to the cultivation of this new shrub. It is not improbable that it would thrive and pro-

duce an abundance of fruit if trained on a south wall, and occupy a place in the garden among other fruit-bearing trees. It fully merits a trial, and I hope at some future time to return to the subject.

Frogmore. J. POWELL.

A FEW MORE WORDS ON THE NEW DAHLIAS.

I CAN but feel highly gratified at the result of my critique of the new Dahlias in a late number of the *Florist*, inasmuch, as it has been the means of eliciting the sentiments of some of the most successful growers and exhibitors, whose collective opinions are, undoubtedly, entitled to the highest consideration.

If it be a true saying, that "in the multitude of counsellors there is safety," then may intending purchasers safely make their investments upon ten or a dozen of the new sorts, on the authority of the interesting table compiled and published in the last number.

I am by no means surprised to find myself in a considerable minority with respect to *the best* flower of the year; and it is rather a remarkable circumstance, that the gentleman whose opinion entirely coincided with my own is the only one of the eight whom I have never had the pleasure of meeting. It would be mere presumption on my part to press my own individual notions in opposition to those of so many more experienced and more successful cultivators; still, I am not yet convinced that my judgment is altogether erroneous. I therefore refer the matter to the arbitration of Time.

There are yet a few of the most persevering Dahlia amateurs who have not favoured us with their views of the case. The names of Mr. Holmes and Mr. Cook, in particular, occur to my mind. It may be said that the former gentleman has abstained from expressing his opinion because a seedling of his own is among the number of novelties. If this be the case, I applaud his motives, while I can but regret that a feeling of delicacy on his part should have deprived the floral community of the results of his extensive knowledge and undeniable judgment. For the silence of the latter gentleman I am at a loss to account.

It tends not a little to the value of the recommendations, that growers for sale have (with a discrimination which does them infinite credit) abstained altogether from giving expression to their convictions. I do not mean to insinuate that dealers would be more prone than amateurs to be biassed in their opinions; but I think they have acted wisely in pursuing the only course by which they could escape the possibility of such an imputation.

And now let me endeavour, as well as I can, to extricate myself from a little scrape, in which my own imprudence has involved me. As the pith of a lady's letter is generally to be found in the postscript, so have I—in this instance—put forth the foregoing remarks as a kind of peg, whereon to hang a few words which may serve both in the way of explanation and apology.

It will be remembered that I ventured, not long since, to become a sort of sponsor for my eccentric friend B., that he would prepare for the

Florist a series of articles in which the principal flowers exhibited during the season of 1855 should be passed under review. I regret to state that no such papers from his pen will be forthcoming, notwithstanding his reiterated and apparently serious promises. The truth is, that with the return of winter my old friend's ideas have again become completely stagnated, and it is utterly hopeless to look for any exercise of his thinking faculties on this side of the 1st of April. I must confess that I had considerable hopes of him. His housekeeper informed me that he had gone so far as to purchase a quire of foolscap; that his old pens had been duly pointed, nibbed, and put into complete working order by the parish clerk and schoolmaster; that his desk was regularly placed before him every evening; and that at the end of three weeks he had actually filled as many sheets of the foolscap before mentioned. This precious manuscript cannot now be found, although I have, with the assistance of Mrs. Stickleback, the aforesaid housekeeper, made the most diligent search after it: the presumption, therefore, is, that it has been destroyed. To be brief:—I called on my friend B. shortly after the setting in of the first frost. I was told he had kept his bed for the last three days, during which time he had slept heavily and uninterruptedly; but that, as he was now awake, and had just partaken of a light refection, he would not, in all probability, have any indispensable objection to see me. I found him with a peculiar dreamy and wandering expression of countenance, half sitting up in bed, and half reclining on a number of pillows of various shapes and wondrously luxurious in appearance. On an ingeniously contrived table, placed *upon the bed*, I observed the *remains*, or rather the *skeleton*, of a grilled chicken, and two *empty* decanters, labelled "Port" and "Sherry" respectively. He vouchsafed me no greeting beyond an almost unappreciable inclination of the head. After a few unimportant observations, I ventured to hint the necessity of bestirring himself, adding, by way of incentive, that the printer was becoming clamorous for "copy." With a considerable effort he raised himself on one elbow,—looked me steadfastly in the face for the space of a minute,—and then, in three emphatic words, consigned the *Florist*, and every person and thing thereunto pertaining, to a place I do not think it necessary to indicate further than by remarking that it is supposed to be the natural "local habitation" of the printer's boy, to whom the curious reader is respectfully referred for more minute particulars. Having delivered himself of his abjuration, with an energy of tone and manner that both surprised and alarmed me, my friend B. sank slowly back upon his pillows, and, lazily rolling over on his side, fell immediately into a sleep, so profound—so appalling in its intensity—that I feel persuaded nothing short of an earthquake, or some other violent perturbation of nature, will arouse him, until his full period of hibernation shall have been duly accomplished.

Feeling myself, in a manner, compromised by this unseemly conduct of my friend B., I am exerting myself to find a substitute to perform the work, for the execution of which he has proved himself utterly incapable. If I should be successful (and I have reason to believe I shall be;—though I make no promises this time) the result of my endeavours shall be forwarded to the office of the *Florist* without unnecessary delay.

A. S. H.

NOTES ON SOBRALIA.

THIS terrestrial genus of Orchids, of which there are at present many species in cultivation, is one of the most distinct in habit, and has a widely different aspect from the usual typical forms which are characteristic of this superb family of the Vegetable Kingdom. They are without pseudo-bulbs, having erect reed-like stems, varying from one to six or seven feet high, with grassy plaited evergreen leaves, some of them bearing the most exquisitely-beautiful flowers, of which S. macrantha is one of the best; it is a plant that no collection should be without (where hothouse plants are cultivated), as it is a free growing kind, producing flowers from May until October. There are two varieties of it cultivated: one has slender green stems five or six feet long, and flowers about four or five inches across; the other has stems about three feet long, of a darkish hue, deep green leaves, and flowers six to eight inches across. This latter is marked in catalogues as "Macrantha splendens." Most of the others have small flowers compared with this; but where there is room they may be grown, as they are interesting, and help to make variety. The geographical range of all the known kinds is tropical America. In cultivation, they require to be kept in what is termed a Mexican house, or in any ordinary plant-stove, where there is not an excessive degree of heat, they will grow and flower if kept on logs of wood; but it is far preferable to treat them as pot plants, for which they seem naturally adapted, potting them in a rough mixture of fibry peat, turfy loam, half decayed leaves, and gritty sand, with sufficient broken potsherds to ensure porosity. They are moist loving plants, and should be freely supplied with water while growing; syringing over head is indispensable once or twice a day when the thermometer exceeds 55°, as it will be found the best method of keeping down the thrips, which are troublesome to these plants, especially if kept too hot and dry. The flowers are produced in spathas, one at a time, on the apices of the stems, remaining in perfection two, or at most three, days. They are developed in succession, six or seven being produced from each spatha. When the flowering season is past, cut all the stems down that have flowered; it will strengthen the plant, and impart vigour to those that are progressing, as those of S. macrantha only flower one season. If the plants require potting, let that be performed before they make much growth, observing to under-pot rather than over-pot them, as they will be found to flower better when the roots are a little confined. They are easily propagated by division of the plant, taking pieces of not less than two or three stems each, or they will be many years in forming a good specimen. The following are the named species in cultivation, with their native habitats; but there are several others, recently introduced, that are to be found in collections:—S. macrantha, Guatemala; S. liliastrum, Demerara and Brazil; S. fragrans, New Grenada; S. sessilis, British Guiana; S. decora, Guatemala; S. violacea, New Grenada; S. chlorantha, Brazil; S. carravata, Guatemala; S. dichotoma, Mexico; S. Galleottianum, Mexico.

J. HOULSTON.

THE EARWIG.

YOUR remarks in the *Florist* of October, under the head of "A Boon to Dahlia Growers," having called forth numerous enquiries respecting the earwig-trap, I have resolved to give your readers some information on the subject, together with a few remarks on the habits and tastes of the greatest of all enemies to the florist—"the earwig."

A few years ago, having been regaling some friends in the garden with Strawberries and cream, I accidentally left some pounded lump-sugar, wrapped in a paper, in the arbour. About a week afterwards I found the sugar-paper where I had left it, and upon opening the parcel, you may guess my surprise in finding, instead of sugar, a complete mass of earwigs, as many as would fill a half-pint measure. The sugar had been devoured by them, with the exception of a small portion, which they were then engaged in despatching. From this simple circumstance I learned that saccharine matter was their favourite food. Every Dahlia grower must have perceived the preference of the earwig for particular varieties of Dahlias, the petals of which upon examination would be found much sweeter to the taste than those kinds they do not attack.

The inverted flower-pot is the only article I have ever used as a decoy for this insect; I have occasionally placed some treacle at the bottom of the pot, which has always proved attractive; but the porous character of the material, coupled with the heat of the sun, caused all trace of the treacle soon to disappear. In June last, Mr. E. Edwards, a neighbour of mine, came into my Dahlia garden, and was much amused with the singular appearance of about 200 pots on the tops of long sticks, which, to his view, were very unsightly. Having enquired their purport, he said something more effective and less obnoxious to the eye might be constructed. Being a manufacturer of glass wares, he asked if they could walk up the sides of a glass vessel. Not being much of an entomologist, I could not answer this question. However, a few days afterwards he brought me a glass vessel about the size of a small tumbler, made with a cone inside, very similar to the exciseman's ink-bottle. We at once caught some earwigs, and, to our astonishment, they could walk up and down the sides with as much apparent ease as a fly. We left them all night, and by the following morning they had disappeared. The glass trap having failed, Mr. Edwards turned his attention to other materials, and in a few days brought me an oblong tin box, with a hole at the bottom, to fit on a stick, at the same time stating, that he thought he had puzzled them. Six of the interesting creatures were soon consigned to their new abode, and, pleasing to relate, there they all were the next morning, looking fresh and well. The day following found them also there. The third revealed only four living specimens and two skeletons, the latter being the remains of those that had either died of starvation or fallen victims to the cannibal-like propensities of their companions. The detention of the insect being now a fact, the next question to enquire into was, would they of their own free will enter this box? Accordingly, some sugar was sprinkled at the bottom, and the box was placed at the top of a Dahlia stick in a locality

where the earwigs had committed considerable ravages. The box remained there for two days and nights, and, upon being taken down and opened, upwards of sixty living examples were at once turned out. The experiment was repeated several times with very similar results. Mr. Edwards immediately registered the invention, and is at the present time engaged in adapting the principle to an article that will combine elegance with utility. When these traps become generally used the poor earwig will be well nigh exterminated from our gardens. In examining the traps there will be no chance of escape, as is now the case from the inverted flower-pots, and when once inside they cannot emerge from their resting-place to take their evening walk, and return at pleasure with a well-filled stomach from the young petals of a Rachel Rawlings or Baron Alderson.

CHARLES PERRY.

Handsworth, Birmingham.

[We have received drawings and description of the earwig-trap from the inventor, which shall appear in our next.]

THE TREATMENT OF CLERODENDRONS.

THIS is a beautiful tribe of plants; when well done, they are grand objects for summer and autumn display in the conservatory. They are easily grown; but they require some room. The principal points to be attended to in their culture are, a good bottom and top heat, plenty of moisture, large pot room, and a rich soil. They are all beautiful, but, as they are large growing plants that take up a considerable space, the following will be sufficient for most private collections:—C. fallax superbum, Kæmpferi, paniculatum, and squamatum. Paniculatum is not so showy as some of the others, still when well grown it is a beautiful object.

The present is a good time to procure young plants; the smaller they are the better, provided they are not pot-bound. If the roots are in a good condition they should have a small shift at once, using a soil composed of two-thirds loam and one-third leaf-mould with a little sand. Plunge them into a bottom heat of about 80 degrees, and let them have a top heat of about 70 degrees by day, with an increase by sun-heat. Keep them near the glass. Maintain a moist atmosphere; but do not let them have too much water at root. In three or four weeks' time they will be fit to have a shift into larger pots;—the roots should come well through to the pots, but not get very matted. The same soil will do for them this shift, with the addition of a little rotten dung. After they are potted plunge into a bottom heat as before, and keep up a moist atmosphere. In about another three or four weeks they will be fit for another shift: this will be about the middle or end of April. Supposing the plants are in eight-inch pots, they may be put into twelve or fourteen-inch pots at this shift;—the soil this time

should be two-thirds rich loam and one-third rotten dung, with a little sand. When potted plunge them into a bottom heat, and keep up a moist atmosphere as before. Do not let them stand too close together; and, if grown in pits or lean-to houses, the plants should be turned round every other day—this will make them handsome symmetrical specimens. If the green fly makes its appearance fumigate directly. About the end of May or the beginning of June they will be fit for their final shift: the soil this time may be nearly the same as at last shift; it should, however, have a little more rotten dung in it. The strongest plants should be put into tubs or very large pots, which should have proper drainage in them; the small plants will not require so large pots when shifted; place in a good heat and maintain a moist atmosphere. Under this treatment they will grow fast, and the leaves will attain a very large size—they should not be injured. When they begin to fill the pots and tubs with roots they will make vigorous growth, and they will require a liberal supply of water. About the middle of July they will begin to show flower; the atmosphere should then be kept drier; they should also have more air afterwards. In a few weeks they will be splendid objects, and may then be removed to the conservatory, where they will continue in bloom for many weeks. By beginning a few plants earlier they may be in bloom for months. By the foregoing method plants can easily be grown eight feet high and six feet through, which when stood about in conservatories are noble objects. After done flowering they will throw up young shoots; a few of these taken off and potted, and put into heat under glasses, soon root and make good plants for another season. The old plants I throw away, preferring young plants for growing into specimens.

M. SAUL.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

THE Anniversary Meeting of this excellent charity took place on Wednesday, the 16th of January, at the Horticultural Society's Rooms, 21, Regent-street, and brought together many of the principal supporters of the Society. Mr. George Paul, of the Cheshunt Nurseries, was called to the chair, when the report was read by the Secretary, and adopted. The following resolutions were also proposed and adopted:—

1. That the report of the Committee now read, together with the balance-sheet, be adopted, and that the thanks of this meeting be given to the Committee for their exertions during the past year.
2. That Messrs. Wrench & Sons be re-elected Treasurers, and that the thanks of this meeting be given to them, for their care and attention to the interests of the Society during the past year.
3. That Mr. John Lee, of Hammersmith, be elected a Trustee of this Society, in the room of the late Mr. Henry Groom, deceased.
4. That Messrs. Charlwood, Lee, and Forsyth be re-elected Auditors, and that the thanks of this meeting be given to them, for their trouble in auditing the accounts of the Charity.
5. That Messrs. Addiscott, Hogg, Charles Turner, Duncan, Peel, and Harding be elected members of the Committee, in the room of Messrs.

Marnock, Thompson, Hamp, Eagles, Dandy, and Osborn, retiring by rotation.

6. That Mr. E. R. Cutler be re-elected Secretary

Statement of the Receipts and Payments for the year ending 31st December, 1855.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Balance, 1854. . .	186	12	10	By Pensions . . .	442	0	0
,, Annual Subscribers .	547	1	0	,, Stock purchased, 300*l.*	269	2	6
,, Donations received at and in consequence of Anniversary Festival, June 11, 1855 . . .	181	12	0	,, Secretary's Salary .	50	0	0
,, Dividends on Stock .	95	12	6	,, Stationery . . .	6	1	0
				,, Printing . . .	41	14	0
				,, Advertising . . .	6	15	6
				,, Expenses of Anniversary Festival .	29	3	9
				,, Office Furniture . .	3	5	0
				,, Postage, Parcels, Circulars, Messages, and sundry expenses .	28	6	11
					£876	8	8
				Balance at Bankers .	134	9	8
	£1010	18	0		£1010	18	4

Stock in £3 per Cent. Consols, £3700.

Audited, Jan. 14, 1856.
WILLIAM FORSYTH.
JOHN LEE.

The election of three pensioners on the funds of the Institution was then proceeded with, there being sixteen candidates for election; and at the close of the poll the successful candidates were—

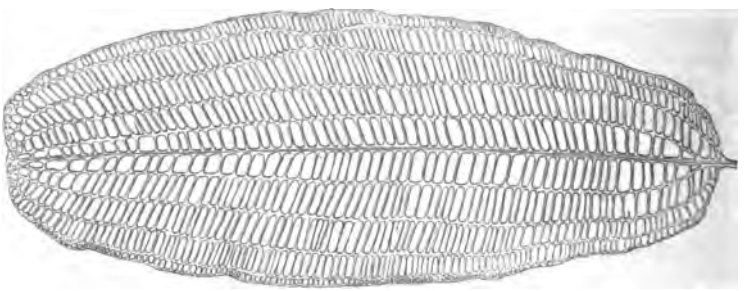
GEORGE KIDD	634 Votes.
JOHN BLACKE	605 ,,
JOHN KENT	576 ,,

Much interest was excited, and no less than 527 polling papers were sent, each recording not less than three votes, and many considerably more. We are glad also to state, that the Institution is well supported. Still, we cannot too earnestly urge our readers to become subscribers, and by thus increasing the funds, enable the committee to place a larger number of pensioners on the list. There are always a great many candidates, none of whom are eligible to take that position until quite unable, from age and infirmities, to support themselves. We are quite confident that if many of the candidates could be seen, and the urgent nature of their necessities known, many would gladly subscribe their guinea annually to the Institution, for the double purpose of helping the funds, and, by their votes, contributing to the happiness of their necessitous fellow-creatures.

OUVIRANDRA FENESTRALIS.

It is more than thirty years ago, we are told, since the Kew Museum was enriched by specimens in alcohol of this most remarkable water plant, gathered by Professor Bojer in Madagascar, and it is stated that it was even known to botanists some thirty years previous to that. Singular to say, however, no living plants of it reached this country until last year, when a considerable number was brought home from Madagascar by the Rev. Mr. Ellis, who had visited that region in the capacity of a missionary, and, fortunately for horticulturists at home, had carried with him, together with an ardent love of botanical enterprise, drawings and other information respecting this beautiful Ouvirandra, which has been aptly described as "one of the most curious of nature's vegetable productions."

Mr. Ellis having succeeded so well in the introduction of this much desired novelty, liberally enriched the collections at Kew, Regent's Park, and Chiswick, by the presentation of specimens to each, and the whole of his remaining stock passed into the hands of Messrs. Veitch & Son, of Chelsea and Exeter, in whose establishments, it may be gratifying to learn, it has thriven most satisfactorily.



In its native stations, the plant is described as growing on the margins of running streams. The root, or rhizome, is about an inch in thickness and six or nine inches long, and is valuable to the natives, who, at certain seasons of the year, gather it as an article of food, the fleshy rhizome, when cooked, yielding a farinaceous substance resembling a Yam; hence, it has been called Water Yam. The plant, Mr. Ellis states, is attached to the sides of the stream in which it grows by numbers of fibres, which penetrate and adhere firmly to the loam or clay of the banks. Entangled among these roots were large quantities of decayed leaves and other vegetable substances, from which the plant probably derived some portion of its nutriment; though, from the bubbles of air found under the leaves, it seemed to possess the property of decomposing a portion of the water in which it grew. Mr. Ellis was, however, informed that it also grew in places which were dry at certain seasons of the year; that the leaves then died down, but the root, buried in the mud, retained its vitality, and when the water returned fresh leaves burst forth, and that the natives spoke of it as very tenacious of life.

The mode of treatment which has been so successfully adopted by Messrs. Veitch, is as follows. A single plant has been placed in the centre of a small quantity of soil, in the bottom of a round glass pan, and filled with water, which is kept as nearly as possible at a temperature of 70°; the skeleton leaves float gracefully just beneath the surface of the water, and produce a most charming effect, which is enhanced by placing bits of white spar or marble over the surface of the soil in which the plant grows.

At present, these Water Yams are in an almost dormant state, the leaves of last year having died gradually away according to natural habit; but already signs of renewed vitality are evident, and shortly the plants will, doubtless, again be covered with "net-work" leaves, the colour of which, as they increase in age and size, changes from the most vivid green to every shade of that colour, being, when fully matured, of the darkest olive tint, and they become almost black before they decay.

The effect of many leaves in different stages of growth, on a fine specimen cultivated in the manner here described, is strikingly beautiful, and must be seen to be thoroughly appreciated.

It is not too much to say, tha , in addition to its intrinsic botanical merit, which will secure it a place in the collections of all lovers of rare and beautiful exotics, the "Ouvirandra fenestralis" is likely, in these days of "fine-foliaged plants," to become even a drawing-room ornament of the first class.

Our wood-cut, which represents a small leaf, will convey a good idea of the general appearance of this singular lace-like foliaged aquatic.

THE CHRYSANTHEMUM.

THE past season has confirmed the impression we had previously formed of the great advantages the Pompone Chrysanthemum possesses over the old large-flowering kinds, both for pot culture and also as a border plant.

They more freely flower a little earlier, and require but very few stakes. Those that visited the exhibition of this flower on the 14th November, at Stoke Newington, must have come to the same conclusion.

Easy of culture as the Chrysanthemum is, we find many fail, chiefly, we think, from putting the cuttings in too early, from which cause they become leggy, instead of dwarf green bushes with foliage down to the pots. The best plan, however, and with the least trouble, is to grow them in the ground from cuttings put in late in May, stopping them once, after they have got hold of the ground, and pot them up after the buds have been formed

By giving them tolerable room in a south border, this plan will be found by far the best.

We have found the following among the best that have come under our notice:—

LARGE-FLOWERED.

Albini Godereau	Bright rosy purple.
Annie Salter	Yellow, fine.
Aregina	Rosy purple.
Auguste Mie	Pale carmine, with yellow tip, fine form.
Australie	Bright orange brown.
Beauty	Blush, fine.
Bernardinium	Deep orange, slightly shaded with red, fine form.
Berryer	Orange yellow.
Bossuet	Pale rosy purple, fine.
Conspicuum	Deep rosy carmine, large and fine.
Chevalier Domage	Golden yellow, dwarf and good.
Didon	Bright yellow, good.
Dupont de l'Eure	Shaded carmine, distinct.
Gluck	Fine yellow.
Goliah	Fine white.
Hermione	Delicate blush, with rose tip, good form, fine.
Leon Lequay	Shaded purple, fine.
La Prophète	Pale yellow, fine.
Madame Poggi	Deep chestnut.
Pilot	Rosy purple.
Plutus	Very fine incurved yellow.
Pluie d'Or	Bright buff, yellow centre, good form, fine.
Prince Jerome	Orange, tipped with brown red, fine.
Queen of England	Delicate blush white, fine.
Trilby	Delicate blush white, fine.
Triomphe du Noir	Bright red salmon.
Vesta	White.
Zephyr	Red eged with gold, fine.

POMPONE.

Anna Boleyn	Bright buff.
Annie Henderson	Yellow, very early.
Aurore Boreale	Orange cinnamon edged with gold.
Aigle d'Or	Incurved pale yellow.
Aureole	Reddish salmon, gold edge, orange centre, fine.
Berrol	Primrose, fine.
Bernard de Rennes	Golden cinnamon.
Brilliant	Bright crimson.
Bob	Crimson, fine.
Comte Achille Vigier	Red and orange, striped.
Dr. Bois Duval	Bright brown red.
Durnflet	Lilac pink, good.
Marabout	Pale blush changing to white, fringed.
Madame Celestine Philopal	Yellow tipped with red.
Madame de Vatry	Peach.
Madame Jules d'Evry	Pale blush, yellow centre.
Mdlle Felicie Albert	Rosy pink, white tip.
Modéle	White.
Nonsuch	Golden yellow.
President Decaisne	White, rosy purple tip.
Requiqui	Deep rosy purple.
Sacramento	Orange yellow.
Solfaterre	Pale yellow.
Surprise	White with rose tip.
Scarlet Gem	Bright red, fine.
Zebra	Rosy lilac, yellow centre.

THE PEACH.

(By a Gardener in the Country.)

Suppose the month of March has arrived, and the compost for the border has been duly prepared, as directed in my last paper; take advantage of the first dry weather in the month to wheel the compost to the border. As this has been duly prepared by turning (if its composition rendered such necessary), no further trouble will be requisite, further than spreading it evenly over the bottom of the border, unless, as before noticed, the soil contains much clay, or is deficient in fibrous materials, when the bean-straw, stubble, &c., may be spread over each layer of soil of three or four inches. This will help to keep the border open and porous, and in a measure will serve as a substitute for turf. Proceed with the filling in till you have the border nine or ten inches deep. Let this be levelled and slightly trod (provided the compost is quite dry); if at all damp, the less it is trod down the better, and planks, in such cases, must be provided for walking and wheeling on, while completing the border and planting the trees.

My previous directions on the drainage will allow for the border to be only eighteen inches in depth. This, experience tells me, is quite sufficient, unless in very dry localities, when I would reduce the drainage so as to allow the borders to be two feet; but, in the greater number of situations, eighteen inches of border in depth, ten feet in width, need on no account (so far as the trees themselves are concerned), be exceeded.

The width of border should in some respects be regulated by the height of the wall: thus, for walls of less height than ten feet, the border may be reduced, as a rule, to the height of the wall. This brings me to the consideration of the Walls most suitable for growing the Peach. It was formerly the practice to erect very high walls for gardens, under the idea that they produced fruit of a superior quality. Such is not the case; and where great shelter is not required, low walls —that is, from eight to ten, or twelve feet high—are the best in every point of view for growing wall fruits. Were I to begin now with a series of walls for fruit culture, I would not care to have them more than ten feet high, and in many places consider even eight feet as preferable. Eight-feet walls, with a coping four or five inches wide, and shallow sloping borders, would be far more likely to realise good annual crops, than the high walls so universally in use. However, as I am not giving directions for a new garden, but simply supplying a few hints to the amateur, I wish merely to remark, that if new walls have to be built, look carefully at what I have stated, and do not care to be as ambitious as your neighbour the *Squire*, whose garden walls are sixteen or eighteen feet high, and with perhaps only one-third of their surface covered with trees—but let one-half of that height suffice. As, however, new walls are not within the scope of every one, it follows that we must take things as we find them, and if there are existing walls, why, the best must be done with them that circumstances admit of. For our present purpose, let us take them to be from eight to ten

feet. I did not recommend the border to be more than half filled with the compost, because the trees can be better planted at this stage, and must, therefore, next consider the kind of TREES most suitable for planting.

There have been writers on fruit trees who have recommended to plant maiden trees—*i.e.*, trees one year from the bud or graft—against walls; "For," say they, "the trees will better establish themselves, last longer, and make handsomer trees withal, when planted young and before the rudiments of training have commenced in the nursery." But the fact is, that to plant walls with maiden trees is not only an unprofitable plan, from the length of time which must elapse before the trees become productive, but such plants grow too strong and luxuriant through the want of the salutary checks which their removal once or twice in the nursery produces, and become quite unmanageable in consequence. Trees should therefore be selected from a nursery which are what is called "two years trained," and consequently are three years old from the bud. If they can be procured four or five years old, I should prefer them, provided they had not any strong gross wood, which the usual nursery practice of heading them back every year encourages. Let the age be what it may, mind the head is properly balanced—*i. e.*, with an equal number of shoots on each side, generally three or four, a centre one for furnishing the middle of the tree, and that it has a clean stem of from nine to twelve inches high—if fifteen inches, so much the better; for dwarf trees are usually budded too close to the ground, and all dwarf trees would both look and train better with a clear stem above the border of twelve or fourteen inches. This would allow the lowermost shoot to be trained at nearly a right angle, and twelve inches above the border.

(To be continued.)

NOTES ON A JOURNEY.—No. II.

FROM Buxted Park, it is about two miles to Maresfield, at which place is the well-known establishment of the Messrs. Wood, famous for Rose growing, the soil being admirably suited for that purpose. Near Mr. Wood's house is a very fine specimen of Cryptomeria japonica, and many other rare specimens of Coniferæ. Adjoining the house, in a boundary hedge, are many fine standards of the Cratægus family, always attractive, from their varied habit, interesting flowers, and diverse foliage.

The Queen of flowers is very largely cultivated here, and pre-eminent among them I noticed the fine Rose "Duchess of Norfolk." Mr. Wood has a number of small, close, cheaply constructed houses and pits, quite in the Rivers' style, in which the grafting of Roses is carried on. Immense quantities of Coniferous plants, in all stages of growth, were here to be seen, and all seemed in the most vigorous health.

The view of the nursery from Mr. Wood's house is most charmingly

picturesque; the ground slopes gently from you to a valley, beyond which are gentle undulations covered with rich masses of Oak, against which the large breadth of Roses, "of all hues," is most happily contrasted; it must be seen, to be fully appreciated. In the height of the season (*for it was now September*), it must be enchanting, and will repay the tourist for a trip by railway.

Retracing my steps, I returned *via* Lewes, and from thence to Arundel Castle, the noble residence of the Duke of Norfolk.

Those who have heard of the far-famed productions of Mr M'Ewen, his Grace's gardener, and who, like myself, are fortunate enough to get access, and experience the kind courtesy of that gentleman, have a treat of no ordinary kind in visiting this unique establishment.

There is something very impressive in the general expression of our old baronial castles; their generally commanding position, venerable aspect, massiveness of structure, and the interesting historical associations connected with most of them, excite in our minds feelings of the most lively interest. In looking at them, our mind's eye is carried back to the age of feudalism, when the despotic owners of such residences were the inheritors of not only the broad lands on which their proud castles frowned grimly, but were also the lords of the vassal population which was located upon the estate. This was the age in which the "strong man armed" kept his house, and awed his dependents by acts of tyranny and deeds of daring misrule; this was the age when "might" constituted "right," and when oppression was the first-born fruit of power. Happily for us, the magnates of our land can now reside peaceably in their castles, without the necessity of employing warder, watch-tower, or portcullis. The bulwarks which protect their residences are the result of the fostering care and the consequent development of the peaceful arts. The occupier of the neat and comfortable farm-house, with its well-arranged homestead—the tenant of the humble but not less happy cottage, has, each in his home, a castle; while the blessings of the education which is now given in almost every village by its proprietor, aided by its most powerful auxiliary, the allotment garden, and the general extension of the principle of "fervent charity to all men:"—all these things win for our exalted men the love and esteem of those in humbler life, and raise around them and their castles bulwarks much stronger than those formed by warlike strategy, and which will be far more imperishable than the legends of chivalry.

How great "a change has come o'er the spirit" of the age! In by-gone years, the powerful barons were "ever and anon" taking umbrage at some petty offence on the part of their haughty compeers, summoning their retainers, and waging barbarous warfare. Now, the prince, the peer, and the farmer only enter the lists together in honourable competition for prize oxen, horses, and sheep. The sword of civil strife is sheathed, let us hope for ever, and converted into "the ploughshare." We see the most "high and mighty" of our land doing all in their power to increase the sum of human happiness, by devoting themselves to the improvement of their estates and their natural dependents—whether farmers, artisans, or labourers—not only by cultivating and expanding their minds by fit methods of instruction, but by permitting

them to participate with themselves in the enjoyment of scenes of luxurious beauty, which were formerly inaccessible to the plebeian portion of society. The liberal kindness of the Dukes of Norfolk and Devonshire, in allowing the public to see their beautiful gardens, is worthy of the most "honourable mention," and it is most gratifying to observe many others "following in the wake" of them. Men who, like these and other illustrious personages, do so much to elevate and improve the minds and condition of the middle and humble classes, will never require castles for their protection, as of old. They have strongholds in the affection of their countrymen, which will endure when massive walls shall have fallen to decay, and the record of such will be verdant and undying, when that of the Warwicks and Leicesters of past days—the warriors and accomplished courtiers that were, *but are not*—shall have been forgotten; when their proud castles, with their "cloud-capt towers" shall have perished, and left "not a wreck behind."

The kitchen-garden at Arundel Castle is a fine and extensive establishment. The houses are light useful metallic structures; and the Peach trees are worthy of especial mention—the bearing wood is laid in very thinly, and it is hard as mahogany. Mr. M'Ewen's practice is—do all necessary pruning in the summer months.

In some of the houses there were trees, as low standards, having their heads trained down in the balloon fashion: these, when the ripe fruit is on them, must be very pretty objects. Strawberries are largely and most successfully grown here; and, among others, Mr. M'Ewen has tried the Hautbois for forcing; all the plants in course of preparation were magnificent. Pears, everywhere abundant, were here particularly fine; more particularly Marie Louise, on tall pyramidal trees. Passing from the kitchen-garden and forcing-houses, I entered a flower-garden, radiant with colour, charmingly arranged. I ascended a lofty tower, called Bevis's Keep, from whence the isometrical view of the garden was perfectly beautiful. Descending again, I went into the garden, and found that at one end of it there were three terraces, with walls, one above the other, each covered with beautiful Peach trees, loaded with high-coloured, fine Peaches. This display of fruit and flowers was, to my mind, exquisite; it seemed as if Pomona and Flora were striving to outvie each other, and I know not which of them deserved the palm—certainly, I never saw anything so charming as the *tout ensemble*. An old apartment of large size, near this place, has been converted into an excellent fruit-room; the great thickness of the walls being conducive to the equability of temperature essential to the long keeping of fruits.

I have seen few places where good taste is, in my humble opinion, so conspicuous as it is at Arundel Castle. Unity of expression pervades the whole, and the introduction of the flower garden I have mentioned, in an episodical manner, rather than mixing it with the sterner features of this fine old place, is, I think, a lesson in its way.

Flowers are ever abstractedly beautiful, and callous is the soul that is insensible to their charms. We strew the joyous paths of youthful life with them, and we place them on the graves of our dearest friends,

fit emblems as they are of our ephemeral existence; but lovely as they are in themselves, their beauty is capable of being heightened or diminished by association. The chaplet of Roses does not lend the charm to the aged brow of the matron which it gives to that of the young maiden. We feel that in the one case it is misplaced; in the other it is part of a beautiful and consistent whole. Surely, for the stern grandeur of an old baronial castle, the plain breadth of grassy slope or lawn, the overhanging rock, the gnarled and contorted Oak, the noble Cedar of Lebanon, the mantling Ivy, with the more sombre and dark foliaged shrubs, are the more fitting accompaniments, each lending its aid to the general expression of wild dignity.

But I shall be told the requirements of modern civilisation indispensably require the accompaniment of a flower garden—granted, that none who has the means would be without flowers. I should say have them by all means, but do not spot and fritter a grand place with pigmy parterres or mop-headed Roses. Have them, but take a lesson from Arundel, and instead of their looking like new patches on old garments, they will, if introduced as an episode, lend the charms of variety and contrast to what is grand, consistent, and imposing.

Arundel is one of the few places in this country that is a perfect and harmonious whole; all its parts are subservient to the general expression; its grandeur is without alloy, and is perfectly unique. Every edifice of a subordinate character is built in the style of castle. The domain is vast, and all its parts are great in proportion. The grounds have fine undulations; the masses of wood are imposing from their extent; and the great breadths of lawn, aided by the irregularity of surface, leave nothing to be desired.

In my opinion, there are few places which rank with Arundel for beauty and grandeur of design, or as illustrative of *clever practical gardening*.

Leaving Arundel, I continued my route by the South Coast Railway to Havant, near Portsmouth, visiting the gardens of Sir George Staunton, Col. Harcourt, at Ryde, and Osborne, the marine residence of our gracious Queen; from thence to Strathfieldsaye, the seat of the Duke of Wellington, and Heckfield, the seat of the Right Honourable the Speaker, a brief account of which places I purpose giving in a future number of the *Florist*.

HENRY BAILEY.

Nuneham, Oxford.

P.S.—I must not omit to mention, that in a valley flanked by beautiful banks of wood at Arundel, Mr. M'Ewen has made a lake, which is very effective, and is upon a scale commensurate with the other parts of the place. In its execution great skill is evident, and its margins are well stored with the most interesting bog and aquatic plants, including large patches of the beautiful Gynerium argenteum, or Pampas Grass.

REVIEWS.

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Trade Catalogues.

Our Trade Catalogues are now becoming part of the Horticultural literature of the day; and the compilers of them, in many cases, invite criticism. It is our intention, therefore, occasionally, to devote space to this purpose, believing that a vast improvement has, in some cases, been effected in the compilation of catalogues over past years; and it cannot be doubted that such should be the case, for nothing assists the purchaser more than accurate descriptions of the articles offered, together with such information and correct nomenclature as can be readily obtained.

No one seemed more alive to this desideratum than the late Mr. Carter, of Holborn, who for many years issued an admirably compiled catalogue of seeds. This plan is worthily followed by his successors,

Messrs James Carter & Co., of Holborn,

whose Catalogue is now before us, and is certainly the best and most useful Seed List we have seen, not only on account of its botanical interest, but for its general and valuable information. We observe that it is the *twenty-first annual issue.*

Messrs. Kennedy & Kempton's Catalogue of Seeds

appears, to a great extent, to be a copy of Messrs. J. Carter & Co.'s, and is useful, although not got up with the same care and elaborate detail.

Messrs. E. G. Henderson & Sons' Catalogue of Seeds

contains a woodcut of the Dioscorea Batatas, or Chinese Yam—a plant, in our opinion, not yet understood in this country; and the Catalogue itself, although not so full of detail as Messrs. Carter's, is still very creditably got up, and contains a large and varied collection of seeds, together with a brief list of new plants.

One of the most interesting features of the year, however, is an *Illustrated Plant Catalogue,* issued by

Mr John Keynes, of Salisbury.

This Catalogue is confined to a few kinds of florists' flowers, but Dahlias principally, and contains about the usual number of New Dahlias and *typographical errors* to be found in Mr. Keynes' Annual List. One of the new Dahlias, "Archbishop of Canterbury," is described as having "a very dark centre;" but we cannot help thinking, the purchasers of a 10*s.* 6*d.* new Dahlia would like to have some information as to the colour of a new flower offered at that price. We also notice, in the description of "Perfection" Dahlia, that "at the full meeting of Seedlings at the National, the middle of September, it was the *only* flower which received the highest award on that day;" but Mr. Keynes has omitted to state that several seedlings exhibited that day had received first class certificates at previous meetings.

At page 5, we find "Bessie (Turner)," and at page 7, "Bessy (Drummond);" but who would suppose or believe that this is the same flower? yet such is the case; and in a small catalogue of 14 pages there is no excuse for this and so many other palpable mistakes. The other plants enumerated are, Carnations, Picotees, and Pinks, of which Mr. Keynes grows a full collection.

The illustrations are novel, and consist of a man looking over a gate —but we cannot see what at; a windmill; and—but we are unable to make out what it is.

MESSRS. DOWNIE & LAIRD'S PLANT CATALOGUE

has also reached us, and contains full collections of Pansies, Hollyhocks, Phloxes, Dahlias, &c.; but why call the new Dahlia "Lollipop" by the more feminine and gentle name of "Lilliepope?" We also notice a new Tropæolum Vanderi (?), *twenty feet in height*, which seems a very questionable recommendation. Altogether, this is a well got up Catalogue of florists' flowers, and contains select lists, including many of the best new things offered for the first time.

Sutton's Spring Catalogue and Amateur's Guide for 1856. Sutton & Sons, Seed Growers and Merchants, Nurserymen, &c., Reading, Berks.

We have as already stated noticed the improvements which have taken place in compiling nursery and seed Catalogues. Many of them contain not only lists of what are offered for sale, but much original and useful matter besides. We last month noticed "Rendle's Price Current," which affords proof of the energy and expense bestowed on getting up these periodical lists; and this month we have to advert to that of the Messrs. Sutton, of Reading, which heads this notice. From a rather lengthened experience in making out seed orders, we have been, at times, perplexed to select what were best, from the numerous varieties of garden-seeds entered; and this difficulty must be much more felt by amateurs and others not so well acquainted with the subject. In the little work before us, the selections and descriptions of the various seeds, &c., offered, entirely obviate the above. The selections made are very judicious; and the descriptions may be safely relied on as being correct, and will form a complete guide to the gardener and amateur to select from. The work is divided into five parts. We strongly advise our agricultural and horticultural readers to purchase the work as a book of reference, as it contains much valuable information, and the perusal will amply repay the trifle it costs.

CALENDAR FOR THE MONTH.

Auriculas.—The mildness of the winter has excited these plants to commence growing at an unusually early period. They will now require water, which they should have more freely as the season advances. As soon as the ball of earth has been penetrated to the bottom with water, top-dress the pots with rich soil. Remove the

plants to a south aspect. As they will now have made considerable growth, protect the plants during cold frosty nights, and pinch off premature blooms.

Azaleas.—Young plants beginning to grow should be potted towards the end of the month, and be put into a little heat: a fibrous peat and sand suits them. Be careful in watering large plants. Give air freely when weather admits.

Carnations and Picotees.—After such mild and moist weather, care must be taken that these plants do not get too much water for a time, or they will start into premature growth. Throwing up their blooming shoots early, and during the time they are in small pots, is much against a good or large bloom. The plants will now require going over to be cleaned of all dead foliage. As they make their growth, the experienced grower will not need to be reminded of the importance of keeping the sparrows from destroying the young shoots.

Camellias and Azaleas.—We wish we could persuade people to appropriate a house to Camellias, and to plant them in a good bed of properly prepared soil. They do much better when planted out than when stunted in pots and tubs, and they do not require near so much attention. Water carefully.

Cinerarias.—If late bloom is required, a few of the last struck plants should be repotted and stopped. The general stock will have had their final shift. Tie out the side shoots, and give them all the room that can be afforded. Aphides will make their appearance: these must never be allowed to get a-head.

Cold Frame.—The principal thing to be attended to here is to keep out frost and damp, and to give all the air possible on fine days. If the weather be frosty, cover up well, and water as little as possible, and when obliged do it, in the forenoon. If you want cuttings of any things they ought to be put into heat to grow.

Conservatory and Show House.—The arrangement of the plants is a matter of the utmost consequence. We have often been through houses which have pleased us, and which in reality contained nothing very remarkable; and other houses we have seen which have not pleased us, though they contained many really good things. The cause was, that in the latter the plants were all huddled together, whilst in the former everything was effectively arranged. Now that variegated-leaved plants and plants remarkable for fine foliage have come into fashion, we have a great help for decoration. Cleanliness is also of the utmost consequence; but this we need not insist on, as most people admit it. As soon as plants in flower begin to go off remove them, and supply their places with others that are just coming into flower. Prune and train creepers on rafters and trellises. Where there are other houses to bring forward plants, there will be no difficulty in keeping these gay at present. Have always a good sprinkling of fragrant plants, such as Neapolitan and Tree Violets, Mignonette, Musk plants, Lily of the Valley, Hyacinths, Narcissus, and other bulbs. Be careful in giving air, and in watering.

Cucumbers.—Keep up a moist growing atmosphere, and a temperature of about 70° by night and 75° by day, with an increase by sun-

heat of 8° or 10°. Guard against red spider by syringing. Water a little more freely, but be careful not to overdo it. Train young shoots, and stop beyond the fruit. Keep the young plants near the glass and in a nice steady bottom heat. Shift into larger pots as they require it.

Dahlias.—Many of the new kinds have been at work for some time, but now is the proper season for the general stock to be put to work. A large number of plants can be made from roots started now, with the advantage of the plants not being liable to become stunted with being kept a long time before they can be planted out. The shoots taken off in the ordinary manner strike readily in a moist—but not too moist—heat. They succeed best in pits or frames, the heat being moderate at first, and increased when the cuttings became callused.

Flower Garden.—The Christmas Rose (Helleborus niger) is one of the best things we have for winter flowering. In severe weather put some covering over the plants to protect the flowers. Plant Anemones and Ranunculuses. All alterations intended to be made should be done as soon as possible, so as not to interfere with planting when the season arrives. Prune hardy kinds of Roses. Attend to Rock plants; some of them are very pretty in spring.

Forcing Hardy Shrubs.—As soon as you remove any plants coming into bloom, introduce in their places more hardy Azaleas, Kalmias, Rhododendrons, Deutzias, Lilacs, Honeysuckles, Ribes, Daphnes, and Roses; also, for a variety, a few double-flowering Cherry and double scarlet Thorns. Give them a gentle bottom heat, and syringe freely.

Forcing Ground.—Keep up a regular succession of Sea-kale, Asparagus, and Rhubarb. Put a lot of Ash-leaved Kidney Potatoes into pots and introduce them into heat, to bring forward for planting out in frames and pits when ready for them. Sow Mustard and Cress. Sow Kidney Beans. Sow Radishes and Early Horn Carrots, also some Celery in boxes, and place in gentle heat.

Fruit (hardy).—Finish pruning Gooseberry and Currant bushes as soon as possible. Cut back the tops of Raspberry canes, and dig or fork over the soil. In open weather, prune and nail Peaches, Nectarines, Apricots, Plums, and Cherries. Prune Pears and Apples, and if any of the trees are crowded with spurs, thin them out pretty freely—those that are left will have a better chance, the fruit will be finer, and you will be more likely to have a crop of fruit another season. Fruit trees of all kinds may still be planted, but the sooner it is done the better; but before planting, see that the borders are thoroughly drained, for unless they are, it is labour in vain to plant. Make good wide holes, and spread the roots out well in planting—afterwards, mulch them.

Fuchsias.—Late autumn-struck cuttings, or those struck during the winter, make fine pyramidal plants, if pushed along in a little heat from this time, by giving them plenty of root room. If dwarf bushes are required, such as those usually exhibited at Brighton, stopping the young shoots must be resorted to. Old plants may now be shaken out of the old soil, and repotted into pots about one-half the size of those used for blooming them in, after which place them in a shady moist situation, using a little heat. The syringe should be drawn over them twice a day, morning and evening. Continue to propagate for late bloom.

Greenhouse: Hard-wooded Plants.—Have soils, pots, crocks, &c., ready for use when potting time comes round. Use fire-heat only to keep out frost. Give air freely on fine days. Attend regularly to watering the plants, as they will now begin to require a little more of it. When Heaths are grown in the same house with other hard-wooded plants, they ought always to have the coolest and most airy part. As soon as any of them are done flowering pinch the faded blooms off. Plants beginning to grow will require more water.

Soft-wooded Plants.—Attend to Fuchsias, and shift as soon as they require it. Do not pinch them for pot-room if you want large specimens; and do not let the plants stand too close together. Mimuluses are a nice tribe of plants, not grown so much as they ought to be. They should now have plenty of pot-room and water, and they will soon flower if placed in a light situation. Pot Liliums, but do not water for a few weeks.

Hollyhocks.—Repot cuttings, as soon as they are rooted, into three or four-inch pots, using rather rich soil. Cuttings may still be put in; any struck during February will flower well if properly managed. Autumn-struck cuttings should now be repotted, or they are liable to become pot-bound before the time arrives for planting them out. Fine spikes of bloom cannot be expected if the plants are prematurely driven into flower, which is likely to be the case if they are allowed to become pot-bound. Seedlings should be pricked off into small thumb-pots, one in each, as soon as they show their second leaves.

Kitchen Garden.—When the weather is favourable, lose not a moment in pushing forward all operations. Endeavour always to be beforehand with your work. When the soil is wet, do not meddle with it; if it be in a nice working condition towards the end of the month, plant Globe and Jerusalem Artichokes, also autumn-sown Onions, Cabbages, Cauliflowers, and Lettuces—the two latter on sheltered borders. Plant hardy herbs of all kinds, also Eschallots and Garlic. Sow Peas and Beans in pots or boxes, and put them into a little heat; when up gradually harden, so that towards the end of this or the beginning of next month they may be planted out when the weather is favourable. Sow Peas and Beans in the open borders twice during the month. Sow a good breadth of Parsley. Sow some Cabbages for autumn crop. Sow some Cauliflower and Lettuce in a little heat, also Celery; and sow Radishes on warm borders. Plant early Potatoes in warm sheltered situations, and, if the soil be pretty dry and the weather favourable, the general crop of early ones may be planted. We grow our earliest crop of out-door Potatoes as follows:—We sprout the sets, and towards the end of this or beginning of next month, when the soil and weather are favourable, we plant on a warm sheltered border the Peas which have been brought forward in pots and boxes in rows from five to six feet apart, and between the rows of Peas we plant the Potato set which had been previously sprouted. We rod the Peas as soon as they are planted, and on each side of the Potato rows we raise a little ridge of soil, so that when they begin to push through the earth we draw a little of this soil over the young shoots; this, together with the Pea rods, protects them from the frost—indeed, it is

rarely they ever get injured by the frost, as we always go over them daily in frosty weather, and draw a little soil over any we see peeping through. By this simple plan we always get Potatoes out of doors early in June—a week or so earlier or later according to the season. The Potatoes and Peas come off about the same time; and we generally plant this border afterwards with Cauliflower and Walcheren Broccoli, at three different times—one part of it about the 1st of July, another about the 15th, and the remaining part about the 30th of July: these come into use during October, November, and December.

Melons.—These require careful attention in watering, potting, &c. Keep them in a steady bottom heat and a moist growing atmosphere, and as near the glass as possible; by this means the plants will be strong and stiff, and after planted out, if properly attended to, there will be no disappointments in the dying-off suddenly. Poor, lanky, weak plants always require careful nursing, and, notwithstanding, they often cause serious disappointments; but strong, stiff, healthy young plants, when planted in a good loamy soil, and with a regular bottom and top heat, and attention to watering, training, and thinning of the shoots, &c., will always give the greatest satisfaction:—this, therefore, is a point well worth attending to.

Orchard House.—In severe frosty weather protect the roots. If towards the end of the month the weather be mild, see if any of the trees are very dry at root; if so, give them some water. Give all the air possible on mild days.

Pansies.—Now is the time for a general repotting of all that are intended to be bloomed in pots. The size of the pot to be used depends on the strength and vigour of the plant. If for exhibiting in pots, the rules for the guidance of exhibitions must be attended to; eight-inch pots is the size generally used; six-inch however is quite large enough for many varieties. Towards the end of the month top-dress beds with rich soil; if half-rotten manure so much the better.

Peach House.—Trees in flower should have all the air possible. Houses just commenced will not require much fire heat if the weather be mild. Syringe two or three times daily with tepid water. See Calendar for last month.

Pelargoniums.—These will now begin to grow, and must have especial attention in watering, room, and air. In watering, care should be taken that the soil is well saturated to the bottom of the pot. Tie out the shoots of specimens as they grow. If late bloom is required from young stock, such plants should now be stopped. Sufficient room and cleanliness are the two principal things to attend to for the successful growth of the Pelargonium.

Pinery.—Get soils under cover, that they may be in a proper state for potting when wanted for the general shifting, which is approaching. See that the whole stock of plants has a regular bottom heat; they will now require a little more water and a slight increase of temperature.

Pinks.—When the soil is sufficiently dry, stirring it on the surface will be a great advantage, pressing it firmly round any plants loosened by the frost at the same time. Top-dress similar to that recommended for the Pansies, either late in February or early in March.

Pleasure Ground and Shrubbery.—Rather than lose a season, we would still plant when the weather is favourable; but the sooner such work is brought to a close the better. Secure newly planted trees from the effects of wind. In mild weather proceed with cutting and pruning shrubs and digging borders.

Strawberries.—Give plants in flower all the air possible, and be careful in watering them; do not give them too much, nor let them suffer for want of it. When the fruit is set, pinch off all the small ones, and remove the plants to a shelf where they can be kept pretty close, and where they will have plenty of light. Water frequently with liquid manure, but cease as soon as they begin to change colour; then keep them rather dry, and give more air: by these means you will secure the three principal points of a good Strawberry—size, colour, and, last but not least, flavour. Introduce into heat, regularly every fortnight, a fresh supply of plants. Keep a keen look-out for green-fly, and fumigate as soon as you perceive any.

Stove.—Water sparingly until the plants are potted. Cut back creepers and other plants not done before. Keep a moderate temperature, increasing towards the end of the month. Pot Amaryllis, Achimenes, Gesneras, Gloriosa, &c. Start some Gloxinias. Begonias are a favourite tribe of plants; most of the kinds will be growing: have a general examination of the entire stock, and pot all plants that require it.

Tulips.—These are appearing above the soil. They will take no harm if tolerably dry. If severe frost sets in after wet they should be protected by a slight covering. If the bed is well drained there is not much to fear from cold.

Verbenas.—Strong healthy cuttings put in now will make the best plants, either for bedding out or pot culture.

Vinery.—Thin the berries in the early houses as soon after they are set as possible. Disbud Vines that are breaking. Syringe two or three times daily Vines just commenced. Maintain a tolerably moist atmosphere in all except where the Vines are in flower. If you would avoid "rust," "shaking," *id genus omne*, give a little air at the top of the houses early in the morning; this lets out heated moisture, which, when confined and the sun comes on the houses, causes serious injury to the young berries. Do not admit much air through the front ventilators at this early season. Avoid a high temperature at nights, but always get the flues or pipes pretty hot early in the mornings; but let the fires get low before the sun gets very powerful. When the pipes are hot in the mornings, you can always with safety give more or less air according to the weather. We never have a badly coloured bunch of Grapes, which we attribute, in great measure, to our giving air early in the mornings, and properly attending to it at all other times. Shut up early in the afternoons, and spinkle the paths at the same time with *tepid* water, and not *cold* water, as is too frequently done. In tying down the young shoots, do not attempt to tie them to their proper place at once—if you do many of them will break off; better go over them two or three times, and tie them each time as close as you can without any danger of breaking them.

1 Emperor Napoleon.
2 Venus de Medici.
Banks.

Plate III

Jas Andrews Delt & Lithco

Printed by C. Chalon

DAHLIAS.

[illegible] EMPEROR NAPOLEON [illegible] AND VENUS DE MEDICI

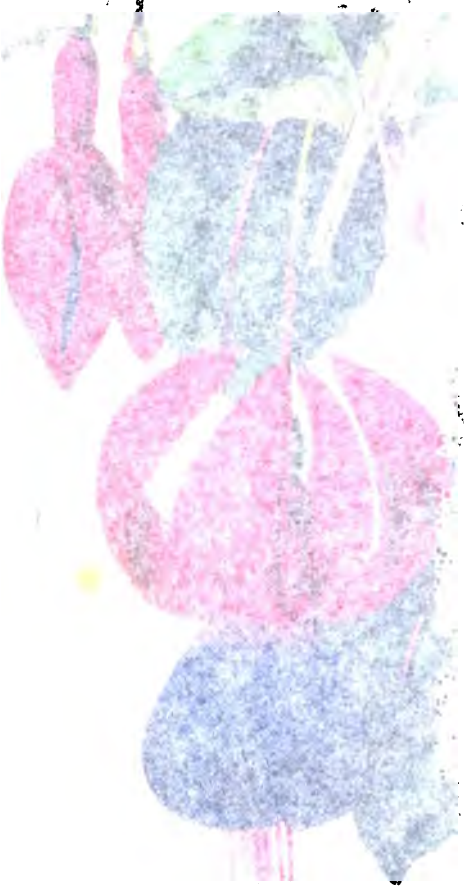
[illegible]

[illegible]s, Esq. of Shobdon [illegible]
[illegible] Lodge [illegible]

[illegible]
[illegible]
[illegible] was a few
[illegible] to the spring
[illegible] of Hanover, [illegible] [illegible] sent
Elegans [illegible] of the [illegible] when [illegible]; Aurora
[illegible] [illegible] Park [illegible] rinet changed [illegible] Variegated,
which [illegible] [illegible] [illegible] like it perfect, [illegible] would
be the [illegible] [illegible] [illegible], with its [illegible]
state the price [illegible] [illegible] [illegible] A[illegible] [illegible] figured in
the Florist for [illegible], 18[illegible] a good [illegible]; and
[illegible] (Burks), a [illegible] [illegible] [illegible]
[illegible] Others of [illegible]
[illegible] [illegible] becoming [illegible]
with [illegible] [illegible] [illegible]: Fe[illegible]
variety, and Venus de Medici [illegible]
[illegible]. Other new [illegible] [illegible] at this season
which we [illegible] [illegible] to [illegible], [illegible] [illegible] with one exception
[illegible] having been [illegible] [illegible] [illegible] notice. [illegible]
[illegible] [illegible] one of Mr. [illegible]'s seedlings we [illegible], and it is
certainly a wonderfully large [illegible] [illegible] flower, [illegible] not a good
[illegible] to recommend it [illegible]. We, however, saw but two
blooms of it, and have not seen the plant.

Believing that a few practical [illegible] the culture [illegible] would be acceptable to our readers, [illegible] a person as really a grower, we applied to Mr. [illegible] of Hurstpierpoint, Brighton, who showed some well grown [illegible] at Brighton in September last, and he has furnished us with the following remarks:—

This useful genus now contains an immense number of varieties, many of which are worthy of being classed with our



1. Empusa Nana nov.
2. Vanes de Nana
Rarus

Tab. XI.

FUCHSIAS,

EMPEROR NAPOLEON (BANKS), AND VENUS DE MEDICI (BANKS).

(PLATE 111).

E. BANKS, Esq., of Sholden Lodge, near Deal, has produced more really good Fuchsias than any other raiser. His Glory, Queen of Hanover, Elegans, Vanguard, Autocrat, and many others, even much older varieties, are universally grown. The late Mr. Story has done a great deal in the way of procuring NOVELTIES in Fuchsias, but he aimed chiefly at producing new characters, as in the white and striped corolla'd varieties. Mr. Banks sought more to obtain varieties excelling in form and of robust short-jointed habit, by means of carefully effected crosses. We need only point to Queen of Hanover for perfection in habit, and we much question if it is not still the finest white Fuchsia yet sent out. There never was a finer batch of Fuchsias let out than those we sent out in the spring of 1854, of Mr. Banks's raising. There was Queen of Hanover, Clio, and Charmer, all light sorts; and Elegans, the gem of the dark ones still when well grown; Autocrat, with its large bold dark flowers of a distinct character; Vanguard, which wants a well reflexed sepal to make it perfect, and should be the parent of many for habit; and Omega, with its exquisite slate blue corolla. Since then, Banks's Prince Albert (figured in the FLORIST for February, 1855), a good dark variety; and Climax (Banks), a good habited kind, but wanting substance in the sepals. Others of Mr. Banks' raising reached us last year, but we failed in blooming them. The two varieties we now figure will be found acquisitions: Emperor Napoleon is a very fine dark variety, and Venus de Medici highly deserves a place in every collection. Other new Fuchsias are to be sent out this season, of which we are unable to speak, none of them, with one exception only, having been brought under our notice. The exception is Wonderful, one of Mr. Banks's seedlings we believe, and it is certainly a wonderfully large and coarse flower, with not a good quality to recommend it beyond size. We, however, saw but two blooms of it, and have not seen the plant.

Believing that a few practical hints on the culture of Fuchsias would be acceptable to our readers, if from a person who was really a grower, we applied to Mr. J. Miles, of Hurstpierpoint, Brighton, who showed some well grown specimens at Brighton in September last, and he has furnished us with the following remarks:—

This useful genus now contains an immense number of varieties, many of which are worthy of being classed with our

finest ornamental plants; all flower very profusely, remain long in perfection, and are all of comparatively easy culture. Large well formed specimens are more easily grown from cuttings than from old cut back plants; these may come in for summer flowering, but the symmetrical form, luxuriant foliage, and increased display of blossom which young plants furnish, when properly managed, cannot be expected from old plants. The old plants will require a little heat to stimulate them into growth, which should be commenced the end of December. The best time to take cuttings for propagation is in January or early in February, and the best kind of cuttings are the young shoots taken off close to the old wood as soon as they are an inch long. Fill a sufficient number of 5-inch pots, carefully drained, with a compost of good loam and leaf-mould or peat and silver sand in equal parts, to within one inch of the top, adding on this half an inch of silver sand; water it gently to make it firm, then put in the cuttings rather thin, after trimming off the lower leaves; give another gentle watering and place them in a mild hotbed or in a propagating house; if in the latter, place bell glasses over them. As soon as the cuttings are sufficiently rooted to bear handling, pot them singly in 3-inch pots, and keep them close and moist until they are fully established; a temperature of from 50° to 55° at night to 55° or 60° by day will be sufficient during the first month, and if kept free from insects and properly supplied with water and a moist growing atmosphere, their progress will be very rapid. But it is probable that some of the plants, despite of every precaution, especially the weakly growing varieties, will prove more inclined to flower than to make strong growth; such had better be set aside, as there is little chance of their forming good specimens. The plants, if struck in January, should be vigorous examples the end of March, ready for a shift into 6-inch pots, but the size of the pots must be regulated by the strength of the plant; the stronger growers, if properly managed, may be potted into 6-inch pots, while 5-inch may be sufficiently large for others; keep the plants rather close after shifting, in order to encourage the roots into action. Syringe over-head on fine warm days freely, and keep the atmosphere moist, and ranging from 55° by night to 65° by day, but water very carefully till the growth of the plants indicates that they have taken to the fresh soil. When the plants appear to have laid hold of the fresh soil, admit air at all times when the external temperature is mild and the house or pit rises to 65°, but close early in the afternoon. Syringe over the plants, and keep the atmosphere moist; clear manure water should be used as soon as it is supposed that the pots are moderately filled with roots. Now some attention will be required to secure the desired form of plant; if the pyramidal shape is preferred, there should be a stake for the

leading shoot, and a timely and systematic stopping of the side shoots, which should not be allowed to get more than three joints from the stem before stopping, beginning at the first lateral branches, and proceeding upwards as they get to the proper length; this will cause the leading stem to push forward, and the lateral branches will increase. But if the plants are to be of a bushy compact growth, the stopping of the leading stem should take place before, or at the time of first, potting the plants, which will cause them to push several shoots; these again must be stopped before the second potting. Now, if these directions have been attended to, the plants will be in 6-inch pots, and with the lateral branches again breaking forth in greater number, and the leading stem advancing in height, if pyramidal plants, when they should receive another stopping of the lateral branches, previous to the final shift, which should take place as soon as the pots are moderately filled with roots, which will be by the end of April or beginning of May. Plants of this bushy compact mode of growth should be again stopped before receiving their last shift.

Now, as to the size of the pots for the flowering of the specimens in, the cultivator must be guided by the time at which he may require the specimens to be in perfection. If they are not in request until September they should be potted into 12-inch pots, and receive another stopping in June, and another in July, discontinuing it after this period. But if the plants are required in perfection in July or August a pot of 9 inches will be found sufficient, discontinuing the stopping after the middle of June.

If the plants are of the pyramidal form but only stick is required, but if of the compact bushy growth one must be placed to every shoot; this is most essential when they are intended for exhibition, as it will show the plants to great advantage if neatly done, and will support them in travelling, the blossoms of some of the large varieties being very liable to drop off if not securely fixed.

One of the greatest points in culture to secure well grown specimens is to maintain a regular temperature from 50° to 65°, excepting the rise by sunshine, for if this is not carefully attended to the lateral branches will be placed at unequal distances, and the joints will not be of a regular growth, which will greatly lessen the beauty of the specimen. The plants will require clear manure water three times a week at all times, when the pots are moderately filled with roots, and if it is applied every day a month before the plants are to come into bloom, it will greatly add to the number, duration, and quality of the bloom, provided the drainage is good, which should be carefully done at the time of the last potting.

When the sun becomes powerful use a thin shade in the middle of bright days, but apply this sparingly, and afford the plants all

the light and air possible without subjecting them to the direct rays of the sun, sprinkling the floors of the house or pit at times during the day, and using the syringe morning and evening. The green fly and red spider are very apt to find their way to the young shoots; the first should be destroyed on its first appearance by fumigation, and the latter, should it appear, may be destroyed by adding a small quantity of sulphur to the water with which the plants are syringed for a few times, and also syringe the floor of the house with the same.

The soil in which the Fuchsia delights is a light rich porous soil, consisting of strong mellow loam one half, well decomposed manure one quarter, leaf-mould one quarter, with a good sprinkling of sharp sand; it should not be sifted, but well mixed and broken together.

A cool airy house is the proper situation for the plants while in blossom, and during this time they should be liberally supplied with water, and they will continue to bloom until the end of the season. It will greatly prolong the blooming season if the seed vessels are removed as they appear, as plants in most cases after having formed seed soon fall off in the production of bloom. The bees also must be guarded against, as they in no small degree hasten the dropping of the flowers.

By carefully attending to these few simple remarks, plants 12 feet in diameter may be grown, having from 100 to 200 branches loaded with bloom. But as to the merit of each plan of growth I have only to add that both of them are equally good, and if plants grown on both plans are arranged alternately the effect is most beautiful; but the plants which have been exhibited by various growers at our floricultural exhibitions will speak for themselves; and now that we have the addition of some good and novel varieties, the display at the coming exhibitions may be expected to be of the greatest brilliancy.

GIVING AIR.

More mischief is done at this season of the year than is generally supposed, by not giving sufficient air to Geraniums and greenhouse plants, but especially to soft-wooded plants. We could point to many greenhouses about the country, where the weak and half-matured growth of the plants says plainly—"Give us more air." Many keep their houses closed during the winter months, and are afraid to give air. *We do not, but air well whenever we can.* This is of the greatest importance to plants, and cannot be too closely attended to. If the weather has been wet and the house is damp, put on a little fire heat and give air, and drive the damp out. By giving air freely you obtain short vigorous growth and well-matured plants, but by observing an opposite course, you get weak growth and stunted flowers. How many a variety has been unjustly condemned in consequence!

THE HORTICULTURAL SOCIETY.

YOUR readers will remember that in your two last numbers allusion was made to the position of this Society. In your January number, you offered some opinion on the steps the Council were then taking, and pointed out that a Committee of Inquiry was imperatively called for, to investigate and report on the Society's affairs, before allowing the Council to abandon the garden at Chiswick, a step which that body seems to all to be extremely anxious to take, for reasons well understood by others as well as myself. In your February number appeared two letters, both of them from Fellows of the Society, and your readers and every Fellow of the Society particularly, should look carefully into the statements therein made by Mr. Edwards, as he shows at a glance a system of extravagance and mismanagement, which would soon entail insolvency on the most flourishing institution, and this too at a season when the Society's affairs were in anything but a prosperous state, and when a corresponding amount of economy and prudence should have dictated the proceedings of its officers. But this is not all. Horticultural exhibitions, like all other exhibitions of a public nature, can only be kept up by liberal patronage. The day is gone by when gentlemen or their gardeners will interest themselves by growing plants and fruits, at a loss to themselves, for the mere sake of obtaining honorary medals, or an equivalent in cash, which makes their chance—even if successful—a loss individually; while to those competitors who stand lower in the prize list, the trouble and expense of cultivation for exhibition are thrown away, and they lose in proportion as they descend in the scale of success. This should not be. Prizes should be given which will allow a fair chance for rising cultivators, who may require only time to enable them to compete successfully, but whose energies are damped by having to enter the lists when a positive loss is certain, even to the extent of including the transit of plants to the exhibitions. Gardeners are by no means a wealthy body, and many a young gardener, anxious to show what he can do, is prevented by the pecuniary loss he must sustain. With these observations, I beg every exhibiting gardener to look at the statement given by Mr. Edwards of the cost of medals for three years awarded to exhibitors, and the expenses incurred in *getting up* the shows:—a sum so utterly beyond what really is necessary, that no wonder the Society found its exhibitions unprofitable, as I find the charge for holding each exhibition approximates so closely on the amount awarded for medals, that I may as well state the amounts to be nearly the same. With these facts before us, we need not feel surprise that a meagre list of prizes was given; while, through the mismanagement of those superintending these exhibitions, an expense twofold what it ought to have been was incurred, and this sum, under good management, would have materially assisted in making a prize list that would have induced far greater competition, and a spirit of content amongst the exhibiting body—a feeling that has not been experienced lately at Chiswick. I may be told that the mere increase of prizes does not always command close competition, as the Society

gave higher prizes for the last year without any corresponding advantage. To this I answer, that it came *too late*. Distrust and discontent had taken possession of the exhibitors, the managing powers were unpopular with them, and it became evident that Chiswick must fall under such management. It is falling fast, and nothing but a thorough change and a searching inquiry into the Society's affairs will restore it to its former level of success.

However, a Select Committee is appointed; and although I forbear saying anything as to its constitution, I shall content myself by waiting to see what they can suggest. I, however, caution the Committee, and your readers too, not to be led away by anything contained in the very plausible report which the Council have published in vindication of their reasons for abandoning the gardens at Chiswick. Here is an instance:—"It is needless to say with what extreme reluctance this conclusion was arrived at. Upon public grounds, indeed, the abandonment of the garden s was less important than it would appear to be, now that the magnificent Royal Garden at Kew, which is so much more accessible by water and railway, has gained its present completeness, &c." Permit me to ask, what there can be in common between a public botanic garden and an institution founded for objects in a great measure different, and supported from a different source? What! are the noblemen and gentlemen who have founded and supported the Horticultural Society at a liberal expense, to be told that their property has become valueless, and the promoters' objects useless, because a public botanic garden is become (as theirs should have been), a model of good keeping and usefulness!—and that therefore it will be better to throw it up altogether? No doubt, it would have been expedient for those who have brought about so deplorable a result, to abandon the gardens by giving up the lease, with the hope, perhaps, that all trace of their incompetency would thus pass into oblivion. Why did not the Council cite the Glasnevin Botanic Garden, or the Experimental Gardens at Edinburgh, as bearing upon the subject? They might have done so with equal show of reason.

Let the Committee appointed make a close scrutiny into all the past proceedings of the Society, and give in their report on the past, and suggestions for the future; and when the proper time comes, I hope means will be forthcoming for making this noble and useful institution instrumental for carrying out the well-meaning intentions of *its founders*.

F. H. S.

LAPAGERIA ROSEA VAR. ALBIFLORA.—In the Jardin des Plantes at Paris, a fine healthy plant of this has produced large white flowers —approaching, indeed, to cream colour—with a tinge of rose at the base, the flower stalks being each two to three flowered. The blossoms of this important variety are stated to be larger than those of the species with which it forms a striking contrast, and it is altogether well worth attention. It is figured in the "Botanical Magazine" for January last, where it is reported to bloom freely in a cool moist greenhouse or temperate Fernery.

THE PEACH.

(By a Gardener in the Country.)

The majority of writers on fruit trees recommend to plant in autumn, and such is a good practice provided there has been time to get everything in readiness beforehand; if not, it had better be deferred till the month of March, which we are supposing is the case. Having selected the trees and brought them to the spot, let the broken ends be cut clean off with a sharp knife, and having marked the places where the trees are to stand, place a barrowful or two of the compost on the spot, on which, when made moderately firm, place the trees, and carefully train out the roots, securing them in their proper positions by a few turves or a spadeful of compost; this will give the trees a slight elevation. The rest of the compost should now be brought in and levelled evenly over the border, covering up the roots as the work proceeds, till the whole is finished and worked off to the proper slope. In filling up the border due allowance must be made for settling down; for even should the compost be moderately dry, it should not be trod very firm; and will therefore settle down a few inches in the course of the summer; and if wet it should be trod on as little as possible, and will require to be left eight inches at least higher than the intended level, to allow for settling.

The distance at which the trees should be planted apart will depend on the height of the wall; for walls 10 feet high, 16 feet apart; for 9 feet walls, 18 feet apart; and for 8 feet walls 20 feet apart, are about the distances which the trees would easily fill.

Where the walls are higher, standards are generally introduced, which will require a separate notice. If the trees are well furnished with roots, the shoots, which will be from three to four feet in length, should be cut back one-half, excepting the centre shoot, which should be cut to within five or seven joints or buds of the bottom, as this will have to furnish wood to fill up the middle of the tree. We are supposing that the trees have either two, three, or five side-shoots each, and a centre one; the side shoots will require nailing or tying to the wall (which, however, need not be done before the beginning of April). Bring them down gently, so as to form an easy curve; the lowermost one will afterwards be trained nearly horizontal with the border, and 10 or 12 inches above it (according to the height of the stem); and the others at equal distances, that, with the three or five additional shoots which are to be obtained from the centre piece of wood, the skeleton of the tree may be set out. Should the weather after planting prove dry, the trees will require water for a few times; and during the summer a wheelbarrow load of half rotten dung spread over their roots will prevent them from suffering from an occasional drought, should it occur. As the trees progress into leaf, disbudding, or the removal of all the young shoots except such as are required to fill up the tree, will be necessary. Great caution and foresight will be required, as on this being properly done the future shape—and I may add, also, the well-doing—of the tree depends. As a rule, the uppermost bud on each

last year's branch must be allowed to remain to form a shoot, and the lowermost, or that nearest the preceding year's wood; and besides, if the last year's shoots are left more than 18 inches long, a shoot should be allowed to grow half way between the uppermost and lower ones; furthermore, it will add much to the simplicity of arranging the wood hereafter, if all these proceed from the upper side of the shoot. We shall then have three buds left to grow into wood on the upper side of each main shoot, as I call last year's wood, for filling up the tree, and forming bearing wood for next season. All the rest should be pinched out, when a few joints long, by the thumb and finger; for knives are useless for summer pruning until much later in the season. There will then only remain the centre branch, which has been cut back much closer than the other, for the purpose of forming a set of shoots to fill up the tree. In disbudding this, leave as many young buds proceeding from the side of the shoot as will, when grown, fill up the space in the middle; of course these will have to be trained much more upright than the others. The remaining foreright shoots, or those which proceed from the front of the wood, should be carefully pinched back in all cases to two or three joints. We much prefer this to cutting them out entirely, as they form short natural spurs which in many cases will produce fruit more readily than the ordinary wood: and should they hereafter interfere with the growth of the tree, by crowding it too much, they can at any time be removed. Nothing will remain further than watching the young shoots and nailing or tying them in to the wall. When they grow to be five or six inches long, laterals or shoots proceeding from the axils of the leaves must be pinched back; and should any additional wood than that selected for bearing be produced in the course of the summer, it should be removed immediately. Insects must likewise be looked for; for in all probability the green or black fly, popularly called *blight*, will make their appearance soon after the leaves, and if not kept down will soon ruin the hopes of the planter. They are easily kept under, if taken in time, by the following means: Procure some tobacco-water, which is sold by the wholesale tobacconists at about 10*d.* or 12*d.* per gallon, and mix one quart of this with one gallon of water; take a good syringe or garden engine, and well wash the trees over, first with clear water—this will dislodge the insects from the underside of the leaves, where they are mostly found—and then follow with the tobacco-water, syringing the trees over gently, that each leaf may become wetted; this, when the water is of a proper strength, quickly kills the FLY. Should it not, however, as sometimes the tobacco-water varies in strength, more must be added to the water till it has the desired effect. We have added soapsuds with benefit, as it causes the water to adhere better to the leaves. As these insects increase with great rapidity, the trees should have a look over two or three days after the first washing, and the application repeated if necessary. When the insects are very numerous some of the leaves will become curled up, and are easily distinguished; these should be hand-picked, not taking off the leaves, but merely dislodging the insects by a small brush before syringing; otherwise they are difficult to get at. Later in the season, should red

spider attack the trees, a little flowers of sulphur added to the water used for syringing will keep them down. Bear in mind, however, that whether syringing for insects or merely with clean water, the foliage should have time to get dry before night.

(*To be continued.*)

A WORD OF ADVICE TO YOUNG ROSE GROWERS.

CONSIDERING all that has been "said or sung" in behalf of the Pose, from Anacreon downwards,—considering too that it is, indisputably, the most popular of all flowers—it is really remarkable in what a state of profound ignorance the great mass of Rose admirers appear to be regarding the cultivation and treatment of their acknowledged favourite. The doings of a neighbour of mine, which I have been watching with some little curiosity, have induced this reflection. The worthy individual of whom I speak appears to have been incontinently smitten with the uncontrollable desire of becoming the proprietor of a *Rosery*. The mode whereby he has carried his purpose into effect is by no means an uncommon one, and is in strict accordance with the following

RECIPE.

"Take a certain quantity of half-starved, ill-conditioned, uneven ground; level it; raise it to the required height by throwing in as many *given* cartloads from the nearest sand-pit as may be needful, and cover all with a crust of turf. Your ground is now in order. Next procure a *cheap* lot of Roses from an adjacent nursery—so many dozens at so much per dozen, as low as you can conveniently arrange it: standards about three feet high will do very well,—but be sure and stipulate that they must all be *distinct varieties*. Now open as many holes in the aforesaid turf as will correspond with the tale of your batch of plants; put (if you can spare it—if not, they will *grow* without) half a shovelful of manure at the bottom of each hole, and a Rose tree on the top of that; fill up the hole, and be particularly careful to replace the turf close around the stem—*it looks so neat*; by no means neglect to fasten each plant securely to its proper stake—the heads *may* become large enough to require such aid. You have now a Rosery complete, and have nothing more to do than to wait patiently for the season of blooming."

Having complied with this formula, in the most approved manner, my good neighbour next did me the honour to ask my advice and opinion. Had he done so *before* he commenced his operations I believe I should have saved him the misery consequent on that "hope deferred" which "maketh the heart sick." As the matter stands *his* case is immedicable. But I see no reason why others should not take warning from his example. Hence the few observations I propose to make. As certain benevolent individuals do not only volunteer, but also, at their own proper costs and charges, make public (by means of advertisements pertinaciously inserted in the daily and other papers) their

disinterested advice how "Persons about to Marry" may best set forth and furnish their respective domiciles, in like manner do I—the costs and charges aforesaid always excepted—purpose to advise Persons about to grow Roses how they may best accomplish their laudable intentions. My very good alumnus! pray do not be alarmed. I have not the most remote intention of inflicting upon you a learned dissertation on the origin, history and progress of the Rose; all that sort of thing is quite beyond my mark;—neither will I detain you with any directions for the laying out of a Rosery, which must be dependent on a variety of circumstances—such as locality, space, individual taste, &c. I will not even go into the question of dwarfs or standards—plants "worked" or on their own roots, &c., far less diverge into the debateable ground of the best material for "stocks." What I have to say is of so general a character that I believe it will apply to each and every mode of culture, and may be summed up in very few words. I have somewhere read of a roving Englishman whose boast it was that he had travelled in perfect comfort from one end of Europe to the other, notwithstanding that his whole vocabulary, over and above his mother tongue, was confined to *two words*—"MANGER" and "CHANGER." Even so you, young aspirant to the honours of Rose growing, by fixing indelibly upon your mind the words SELECTION and CULTIVATION, and making their import the basis of your operations, will experience no difficulty in blooming Roses to perfection; and—*experto crede*—much delight you will find in the innocent and healthful occupation.

With regard to *cultivation* proper, it is scarcely necessary for me to dwell on that point at present. You will find ample directions in scores of manuals, which you will do well to consult and follow. Respecting choice of sorts, I hope to offer some hints, the result of many years' experience, which may be useful to you, presuming always that a *selection* is more your object than a *collection*. Notwithstanding the liberal addition of novelties, I find my number of sorts decreasing year by year, as I have found it more satisfactory to grow half a dozen plants of really beautiful kinds than to occupy the space with a like number of second-rate varieties. I now proceed to enumerate a few of the very best Roses in each of the families into which—for reasons unfathomable by me—they have been divided; and you may safely *depend on* all or any of these as first-rate hardy sorts, prolific bloomers, and free openers. I append the names only, the colour, form, habit, &c., of each individual may be gathered from the very complete catalogues which the magnates of the Rose trade now compile with the utmost care, and disperse with boundless liberality. The present list has regard more especially to perfection of form in the flower, irrespective of the habit of the plant. If desirable, I will, on a future occasion, enumerate a few sorts more peculiarly adapted to the purposes of general decoration. These are as beautiful, in their way, as those exquisite specimens which form so great an attraction at the great metropolitan exhibitions. The bold dashes of a Grieve or a Beverley are works of art no less than the more delicate touches of a Guido or a Raffaelle.

One word more. Do not allow the prevailing rage for Autumnal Roses to render you oblivious of the beauties of the good old summer

bloomers. Roses in August and September are, I admit, highly desirable, but Roses in June and July are no less so; and you will do well to *depend* on your old friends for an early display. There are some of them so exquisite that no one possessing a particle of taste would think of discarding them. I must see Autumnal Roses able to cope with Coupe d'Hébé, Ohl, Paul Ricaut, &c., before I—for one—will consent to be separated from my ancient favourites.

Roses having but one season of blooming, viz., in Summer.

Moss.
Blush
Common old
Celina } hybrid
Laneii }
PROVENCE.
Cristata
Old Cabbage
Rachel
Reine de Provence
HYBRID PROVENCE.
Adrien de Cardoville
Blanchefleur
La Volupté
Princesse Clementine
Rose Devigne
GALLICA.
Boule de Nanteuil
D'Aguesseau
Gloire de Colmar
Kean
Ohl
Sanchette

ALBA.
Felicité
La Seduisante
Madame Audot
DAMASK.
Duke of Cambridge
La Ville de Bruxelles
Madame Zoutman
HYBRID CHINA.
Blairii
Brennus
Charles Foucquier
Chénédolé
Comtesse de Lacepéde
General Jacqueminot
Gloire de Couline
Juno
HYBRID BOURBON.
Henri Barbet
Charles Duval
Coupe d'Hébé
Paul Perras
Paul Ricaut

Autumnal Roses—Varieties having more than one season of blooming, improperly designated Perpetuals.

HYBRID PERPETUALS.
Auguste Mie
Baronne Hallez
Baronne Hecheren
Baronne Prevost
Caroline de Sansal
Colonel de Rougemont
Duchess of Sutherland
Géant des Batailles
General Castellane
General Jacqueminot
Graziella
Jeanne d'Arc
Lady Stuart
Leon des Combats
Louis Peyronny
Madame Phelip
Madame Rivers
Pius IX.
Paul Dupuy
Prince Leon
Reine des Fleurs
Robin Hood
Sidonie
Souvenir de Leveson Gower
Triomphe de Paris
William Griffiths
William Jesse
BOURBON.
Acidalie
Aurore de Guide
Charles Souchet
Dupetit Thouars
George Cuvier
Henri Lecoq
La Gracieuse
Souvenir de la Malmaison
Vorace
TEA SCENTED CHINA.
Adam
Devoniensis
Eugene Desgaches
Moiré
Niphetos
Souvenir d'un Ami
NOISETTE.
Cloth of Gold
Lamarque
Solfaterre

If you cannot afford a south wall for the varieties comprising the two last sections, I advise you not to attempt to grow them out of doors. You will only meet with disappointment.

A. S. H.

DESCRIPTIVE LIST OF HARDY CONIFERS.—No. XIX.

ABIES MENZIESII—MENZIES' SPRUCE FIR.

In a short description of the Pinetum at Nuneham Park, Oxon, which we gave at page 305 of our last year's volume, we alluded to the many fine Conifers we found in that Pinetum, and having obtained permission from the liberal proprietor, George Vernon Harcourt, Esq., to figure any we thought proper for the *Florist*, we now avail ourselves of this kindness by presenting our readers with a woodcut of A. Menziesii, which represents one of the handsomest trees of the kind we have met with.

Menzies' Spruce Fir is an upright-growing tree, forming a regular pyramid, and closely resembling in its general outline the common Spruce; but is readily distinguished from all other Firs by its glaucous hue, which makes it a conspicuous object even at a distance. It grows to the height of 70 or 80 feet, and with branches produced very regularly in whorls; these, when the tree is in good health, are thickly clothed with leaves of a light vivid green, marked with distinct silvery lines underneath; both branches and branchlets are covered with tubercles, and hence this Fir is sometimes called "the warted-branched Spruce." The leaves are *resupinate*, or turned upwards, from being twisted at their base; and this peculiarity, by turning the under sides of the leaves upwards, and exposing the silvery lines beneath, gives the tree the peculiar glaucous appearance we have just alluded to, and which adds very considerably to its character as an ornamental tree. The cones are pendulous, cylindrical, and about three inches long. Seeds very small,

As an ornamental tree, Menzies' Spruce is entitled to consideration. Its regular mode of growth has something attractive in it, but it is to the peculiar silvery hue of its foliage that we wish most to direct the attention of planters. When the professors of landscape gardening have made more progress in their art, by paying greater attention to the colour of foliage in grouping trees, our present subject will form an important item in landscape composition. Those who may have seen what Mr. Barron has done at Elvaston, by grouping different foliaged evergreens, will be able to judge what may be effected by artistically grouping the various Pinuses, Spruces, &c., in masses. Menzies' Spruce Fir, the Pinus cembra, and other light-foliaged Conifers, will contrast admirably with the Stone Pine, Pinus austriaca, and other dark-foliaged species.

Our esteemed friend Mr. Bailey informs us, that the Pinetum at Nuneham was planted in the autumn of 1846. The soil is a deep sandy loam, in places mixed with the gault clay. The ground was

prepared by trenching large spaces two feet deep, and raising upon the surface large hillocks of good soil. The plants, which were in pots, were

ABIES MENZIESII.

entirely shaken out, and the longest root was let in as deep as it would reach, as a kind of tap-root. As soon as this root took hold of the soil, the plant was in a great measure secure from being blown over by the winds, an evil to which all trees transferred to the ground from pots are extremely liable, from the roots having a natural curved form by growing round the sides of the pot. This practical hint is well worth remembering by those who have to plant trees from pots, especially if they have been grown for any length of time in them.

This species was named in honour of A. Menzies, Esq., who had previous to Douglas travelled over a great part of the north-west coast of America, and had discovered this and many other interesting plants. Douglas found it in North California, and describes it as furnishing a useful kind of timber.

Menzies' Spruce appears to thrive best in situations where the soil is moist for the greater part of the year; in low bottoms, not absolutely flooded, with a moist atmosphere, it grows extremely fast. It is likewise found to thrive well in Scotland; where, on the most exposed moors, it never suffers, but, on the contrary, the peaty soil and humid atmosphere appear favourable to its growth. On dry soils it frequently loses a portion of its leaves during the dry weather, and this gives it a shabby appearance and has led some to condemn it. In such situations it should be liberally supplied with water during the growing season.

A FEW WORDS ABOUT BEDDING PLANTS.

MUCH attention has for some years past been paid to the development of resources in bedding plants, and the consequent introduction of many new varieties. We can well recollect the time when annuals were generally used for bedding purposes, when Candytufts, Clarkias, Marygolds, &c., were in request, and many have been the changes in varieties of plants up to the present day. In Verbenas alone, how many varieties have been introduced since Tweediana and Melindres came out. Not that all are suitable for bedding purposes; such is far from being the case, as many varieties are best grown as pot plants, and we often wonder why they are not oftener cultivated in pots for summer decoration. Our purpose now, however, is to point out such varieties of recent introduction, or such as are about to be introduced, that will be found useful additions to the flower garden. In *scarlets*, for a brilliant orange scarlet, none is better than King of Scarlets, a capital variety for a bed, and fills well. In *dark scarlets* there is Defiance and Mrs. Woodroffe, but the latter variety is even a stronger grower than the former, and not so useful. John Edwards will, we think, prove a good useful bedding scarlet variety; so also will Comet and Glowworm, and Lord Raglan is a good pale orange scarlet kind. In Gloire de France we have a beautiful soft salmon pink variety of the finest form, but we are afraid it is not a very good grower, or it would be very valuable. Esther is a pale cerise, of dwarf close habit, and a capital bedder. In shaded reds or crimson, Brilliant de Vaise is a good bedding

variety, but rather a robust grower; and Duc d'Almida, scarlet and crimson, and of good habit. Passing on to deep crimsons, Rouge et Noir was one of the best, but was deficient in form. This defect is happily remedied in King of Sardinia, which has the same colours, but is much better. We are somewhat deficient in this colour, of which old atrosanguinea was the type. Crimson Perfection is a capital variety, but not so deep in colour, being more of a bright ruby crimson, and will make a very lively bed. There is a great deficiency in *rose* or *pink* coloured varieties; indeed, we cannot name one old variety that is really useful. In this class, Loveliness is a great acquisition, clear rosy pink, an excellent close growing variety, which braves sun and rain. In *light blue*, Auricula has hitherto held a place, but an improvement is effected in Prince Arthur, which is of a similar colour, but better. Blue Bonnet will, however, be the best light blue for bedding, and keeps its colour well, and is of a good habit. In *blue purples*, we have Blue Beard, a good bedding variety, and Violacea, which is of a deep rich colour with white centre, and most useful for bedding. Purple King is the best *light purple*, and in *dark purples* we are now somewhat rich, having Tyrian Prince, rich dark purple with white centre, Duke of Cambridge, which is an improvement on Tyrian Prince, and Field Marshal, which will be found a very useful close growing variety of a violet purple colour. There is also Wonderful, which makes a good bed, and keeps in bloom so late in the autumn, of a plum purple colour with large white centre. There has been very little improvement in *whites*. The best in colour and habit is, in our opinion, Celina Mallett. Mrs. Halford is a superb variety, waxy French white and very large truss, but appears to be a very strong grower, but in pots it is very fine; and there is Mrs. F. G. Caley, white with a small pink eye, that is useful for bedding purposes.

In Scarlet Geraniums we have now many valuable varieties. Attraction is one of the best we have seen, and is grown at Frogmore; it is bright scarlet in colour, of medium growth, with very large trusses. Royal Dwarf is also another first-class bedding sort and a profuse bloomer. Sutton's Scarlet Perfection is an improved Tom Thumb. General Pelissier is first-rate as a bedding variety, something like Cerise Unique in habit. General Simpson is of a brighter orange scarlet than any we have seen, with a clear white centre, and a dense bloomer. One of the most novel and distinct, however, is Lady Downes, soft rosy carmine, good truss, shape, and habit, being very dwarf and a dense bloomer—a most pleasing colour for a bed. There was room for some improvement in *pinks*, and we have it in Ingram's Princess Royal, which is of a bright rose colour with white centre, large truss, and a profuse bloomer. This was raised at the Royal Gardens, and will be found an acquisition. In *whites*, much has yet to be done, Hendersoni is the best. Boule de Niège is not a clear white. We hope some one will soon effect an improvement here. For an edging, or even for a bed, the pretty dwarf-growing Pricess Royal, or Baron Hugel, with its dark small horse-shoe foliage and scarlet flowers, must not be lost sight of.

Variegated Geraniums have now become very useful accessories to flower gardening. Golden Chain and Lady Cottenham are the best for

yellow-bordered foliage, but we yet want a good scarlet-flowered variety. In *white variegated-leaved* sorts, Flower of the Day has hitherto held precedence; but we think it will give way to Alma, which is quite as good a grower, with smoother foliage, clearer white markings, and bright scarlet flowers, and is all that could be wished for. Osborne's Brilliant is in foliage more like Mangles' old variety, with a profusion of deep scarlet flowers, but with free growth it has a tendency to lose the variegation. Of Mrs. Lennox, we have not yet seen enough to speak with any certainty; and this remark applies to others, of which we know very little. Silver Queen is a variegated "Lucia rosea," but of no particular value as a bedding variety. Dandy and Variegated Prince of Orange are two small growing and distinct kinds that are very useful for margins. One other class of Geraniums still remains, the *hybrid bedding varieties*. In this, we like best, Mrs. Toward, Purple Unique, Diadematum Spini, Pretty Polly, Morgani, Quercifolium superbum, and one or two others.

In Fuchsias, none seem more appropriate than some of the old sorts, excepting Othello, which is quite a dwarf free-blooming variety. We have also noticed lately a variety named Miellezi, very much resembling the old Microphylla, and useful for small beds or for margins.

Yellow is a colour much needed in flower gardening, and, excepting in Calceolarias, we are somewhat deficient in this colour. One of the most useful deep yellow coloured plants we have seen is the double Chrysanthemum regalium, which, when kept pegged, will be found a very useful bedding plant, as it blooms very freely until late in the autumn. For a late bed of this colour, Chrysanthemum Annie Henderson, if grown on early in pots and planted out, would be useful, as it is an early blooming variety. There is also the Double Yellow Nasturtium, Œnothera macrocarpa, the Yellow Bouvardia, and Lantana crocea superba, which is of a deep orange colour, and makes a good bed.

In Petunias, the new double white will, no doubt, be found a useful plant for bedding, but autumn-struck plants will be found to flower more freely. Not but what young plants will do well, but it is evidently a free grower. Alba magna is the best single white variety, and makes a good bed. Amazon is a very good purple variety; and Crimson King, or Crimson Perfection, the best of the small-flowered crimson kinds for a bed. Prince Albert is unrivalled as a crimson, when it does well. This variety is also known as Semi-duplex, and has large shaded crimson flowers. In rose-coloured varieties, none is better than Shrubland Rose for beds, although Marquise de la Ferte is an improvement on it; but we have yet to see if it will do for planting out. British Queen and some of those beautifully veined varieties make showy beds, but as they are not of decided colours, the clearness and beauty of the marking is often lost. Among these, Purpurea alba will be one of the most distinct and best for out-door decoration. Some of the new Petunias, to be sent out this spring for the first time, are very beautiful for pot culture, especially the new Carnation-striped sorts from the Continent; also Smith's Hermione, Majestic, and Major Domo.

Much has been done in shrubby Calceolarias lately, especially by

Mr. Cole, of St. Albans, who exhibited such a fine batch of seedlings last year. Among these are some distinctly spotted kinds, of good habits and dense bloomers. His King of Sardinia, a crimson variety, Orange Boven, Goldfinder, and Orange Perfection, will be very useful for bedding. What a little gem is Cole's Prince of Orange!—of a brownish orange colour, exceedingly dwarf, and an immense bloomer; no variety stands brilliant sunshine or a pelting storm better. The bed may sustain injury for two or three days, and it is as bright and gay as ever, and continues in full bloom until quite late in the autumn. No garden should be without this variety, which everybody can manage, as it is so easily propagated and kept. Purity turned out well, clear white in colour, a free bloomer, and of good habit. It has a tendency to get up, and should be kept dwarf and not grown too luxuriantly. Autumn-struck plants are best. We had a row of about twenty *spring-struck plants* out last year on an outside border of one of the greenhouses, the plants being about eighteen inches in height and a mass of flower. In crimsons, Beauty of Montreal is one of the best and most effective, a small-flowered variety, but very bright in colour, almost a scarlet, of good habit, and stands the weather well and continues flowering late. Crimson King is a good dwarf-growing, large-flowering sort. Two or three of Henderson's new ones of last year are also good as bedding varieties, but we have unfortunately mislaid a memorandum respecting them, taken when they were in bloom. We are now rich in yellows. Pallida is the best *pale yellow*—Erecta, one of the best *dark yellows*; and we have previously named Goldfinder. Wellington Hero is a good deep yellow variety, and Kayi should not be lost sight of. Golden Chain is a free-growing dwarf yellow variety, blooms freely, and is well worth growing.

There are now several varieties of Lobelia Erinus, of different shades of colour, but Maxima or Speciosa are as good as any. Densa multiflora, a variety from Scotland, pleased us very much as a bedding plant, although it is not very distinct from some of the others. Passing on to miscellaneous subjects, the blue Anagallis and pale blue Ageratum are both useful, but the latter requires pegging down to get a compact bed. The Double Purple Senecio is a very useful bedding plant of a serviceable and effective colour. Among Heliotropes, Beauty of the Boudoir is one of the very best, dark purple and of close habit, with good foliage. Corymbosum is the best light variety for bedding. Phlox General Radetsky makes a good bed, but the plants should be summer struck. It is a bright carmine striped variety, of Drummondi habit. Saponaria calabrica makes a pretty dwarf rose-coloured bed, and is easily grown from seed, but should be sown in February or March. In Salvias, we want improvement as bedding plants; Patens and Fulgens are the best, but the habit is against them. There are many other plants we could name that are most useful for bedding purposes. There are Delphinium magnificum and D. Hendersoni, with their bright blue flowers, and both varieties have a tendency to continue throwing up shoots through the summer. A bed of either, separately, or edged with any other colour, is very effective. We have often thought that many of the fine hybrid Gladioli would be very attractive for beds, planted as well with

some dwarf-growing plant of a contrasting colour. Many bedding plants should, if possible, be struck the previous autumn. It is not necessary for Verbenas and a few other things, but it is certainly best for Geraniums, Senecios, Petunias, Cupheas, Anagallis, Lantanas, &c., as the plants are woody and begin blooming earlier, and do not generally produce such exuberant growth. We have seen beds of *spring-struck* scarlet Geraniums and other plants, about London, growing vigorously in the autumn, with a very scanty display of flowers. In wintering bedding stuff, the plants should be kept dry and well aired, and in the case of variegated Geraniums, for instance, a little gentle warmth for three or four weeks now, will materially assist them in producing good foliage, before hardening off for planting out.

The mixed system of planting seems to be dying out, and the *riband system* more generally followed. This is the plan adopted so successfully at the Crystal Palace, Enville, and many eminent gardens; and in our opinion, it is by far the most effective. For this purpose, variegated plants, such as Flower of the Day and Golden Chain Geraniums, and the variegated dwarf Koniga, are most useful; so also is the silvery-leaved Cineraria maritima an excellent plant for riband planting.

In the November number for 1855, we entered somewhat fully into an explanation of this style of planting, in our report of the celebrated flower-gardens at Enville Hall, the seat of the Earl of Stamford and Warrington, to which we beg to refer our readers.

IS YOUR DAHLIA GROUND PREPARED?

THIS question is superfluous to many of our Dahlia-growing friends, as we know quite well their ground was trenched in readiness before Christmas last; at the same time, we know that a great many growers of Dahlias through the midland districts and the north *have not done so*, and do not see the importance of it. We know, in many cases, that the ground will not be trenched or dug up until planting time, unless our observations urge them to do so. Many, in planting out their Dahlias, think that a hole opened with a trowel or spade on a hard border is sufficient: *but it is not.* The piece of ground should be trenched and allowed to remain untouched until planting time. No manure or anything need be trenched in. At planting time, which should not be earlier than June, mark out the ground for each plant, and let three or four spits of earth be thrown out, and the same quantity of *rotten manure* dug in and mixed with the soil. Plant with the hand, and take care that beside the centre stake you have three short stakes at a triangle, about a foot from the plant, as by tying the matting to the centre stake, thence to the plant, and fastening to the shorter stakes, the plant is quite secure from winds. Should any of our readers wish for information, at the proper time, as to watering or the application of manure water, we will gladly give it. As soon as you receive your plants, pot them into a larger size, pot and keep them growing into sturdy healthy plants. By doing this, much time is saved.

NEW FERN—PTERIS ASPERICAULIS.

THROUGH the kindness of Mr. William Cole, of Fog Lane Nursery, Manchester, who has sent us specimens, we are enabled to give a

woodcut of this beautiful Fern, seed of which was sent home from the East Indies in 1852, by Dr. Wallich (carefully placed on the roots of

Dendrobium Paxtoni), to E. Howarth, Esq., of Sale, near Manchester, with whom the seed vegetated, and we believe the surplus stock was placed in Mr. Cole's hands for distribution. It thrives in a tolerably moist atmosphere, at about 75° to 80°, and Mr. Cole tells us that the foliage should be kept dry, and that a mixture of peat, leaf-mould, and sand suits it best.

Dr. Wallich sent dried specimens to Kew; we understand, but Mr. Howarth was the first to introduce it in a living state.

NOTES ON A JOURNEY.—No. III.

From Arundel to Havant the country is flat and monotonous, presenting little to interest the traveller, excepting the old town of Chichester, with its cathedral. From the proximity of the railway to the sea-coast there is a scarcity of arborescent vegetation, and what there is is of a stunted character. English scenery is generally characterised by fine trees and gentle undulations of surface; but here it is much like the travelling in Holland, for sameness. Looking back towards Arundel, the fine masses of dark trees which that noble domain comprises are very striking.

The garden of Sir George Staunton, near Havant, is a very interesting one, most skilfully arranged by Mr. Scott. This place is noted for its fine specimens of stove plants, amongst which the rarer tropical fruits are worthy of special mention. Of the Nutmeg, the Clove, the Bread-fruit, the Bamboo, the Date Palm, and the varieties of the genus Ficus, there are very fine specimens in the lofty stove, the side benches of which present some *glorious Orchids*. There is a small octagonal house appropriated to the reginal Water Lily, known better by the name of Victoria. The grounds are not extensive, but were in very nice order, and I was much struck with the splendour of the Geraniums, the flowers of which, throughout the south coast, have a *vividness* and intenseness of colour which puts our midland and northern "displays" in the shade.

From Sir G. Staunton's I next visited St. Clare, the marine residence of Colonel Harcourt, at Ryde, Isle of Wight. This place is a large villa, with a lawn sloping to the sea. Its great charm consists in the fine Oaks which grow between the house and the sea, and between whose dark and luxuriant foliage the marine blue, on a bright day, is exquisitely beautiful. A large and choice collection of Roses is grown here, which have attained a just celebrity; and Colonel Harcourt, who is a great patron of gardening, possesses many choice and good specimens of trees and shrubs. Situated just opposite to Spithead, this place has almost an Italian climate, and the colours of all flowers are much enhanced in brilliancy: Fuchsias and Myrtles seem to luxuriate in this "*Paradisus terrestris*."

A short walk brought me to Ryde Pier, and from thence by steam-boat to Cowes. This is an old, ill-built place, but some beautiful villas have lately sprung up beyond the old town, on the road leading to

Osborne House, on arriving at which I found my clever and indefatigable friend, Mr. Toward, at home, and, by his kind courtesy, I had a great treat here.

It might be deemed a breach of good faith, and manners too, were I to particularise all I saw at this charming place; I will therefore only make a few general remarks upon it.

Osborne House, the marine residence of our gracious Queen, is an elegant Italian villa, built upon a large scale, to suit the requirements of the royal household. It is remarkable for its pure and classic elegance of design. Situated upon high table land, it is surrounded by a spacious and noble terrace garden, enriched with vine-clad arcades; the walks are made of asphalte, and the margins of the beds formed of the most durable woods, painted and sanded to appear like stone. When I saw it, I was in ecstacies at the brilliancy of colouring which the well-filled beds displayed—it presented a *tout ensemble*, such as has, I think, been rarely seen, and such as the favoured clime of the Isle of Wight can alone depict. Scarlet colour was, in Geraniums, incomparably dazzling —crimsons were rich, in its fullest sense—pinks were peculiarly vivid —blues were ethereal, and white of matchless purity. Beyond the terrace was a noble expanse of unfrittered lawn, and then the eye looked over rich banks of wood, beyond which the bright, blue, and beautiful waters of the Solent Sea extended, till they blended with the horizon.

In my former Notes I have remarked upon the admirable unity of expression which is evident at Arundel; Osborne is another exemplification of that principle of congruity which is so pleasing to a well-regulated mind. Although the character of Arundel is very opposite to that of Osborne—the one being the expression of stern dignity, while the other is an example of all that modern luxury can develope with *tasteful propriety*—still each is, in its way, charmingly consistent.

Returning *via* Basingstoke, I next visited Strathfieldsaye, well known as the seat of the late and present Duke of Wellington, and formerly belonging to Lord Rivers.

This place is about eight miles from Reading, and is upon the London clay; a cold, wet, and—until of late years—an undrained district. The visitations of early autumnal and late spring frosts are most severe, and my intelligent friend, Mr. Johnson, his grace's gardener there, has for years lost his crops of fruit; till, under the advice of Mr. Parkes, the eminent drainer, he adopted the Deanston plan of *deep drainage*, coupling with it an efficient canvas screen, with temporary coping, removable at pleasure. He had previously drained but two feet deep, fearing the water would not soak through the unctuous and stiff clay, but at the instigation of Mr. Parkes, he lowered all the drains to four and five feet deep. The result was, that from being the latest garden in the neighbourhood it has become one of the earliest. One drain, five feet in depth, was made on the south side of a wall, the north side of which was covered with trees of the Morello Cherry; these ripened their fruit very late in the season, made wood which was ill matured, and were mossy. The drain was made in March, when a thermometer placed in it indicated 45°, but afterwards, during the summer, it rose gradually to 61°. This, at five feet deep, was very satisfactory, and

resulted in the fruit of the trees ripening three weeks sooner; in that season, the wood became well ripened, and the moss disappeared.

During some years after drainage, test holes were made in the drained and undrained soils, and the temperature of these was accurately noted. The results of these observations were most interesting; but although the records are in Mr. Johnson's possession, he does not feel at liberty to give them to the public (and this with a sensitive delicacy which does him honour), as the experiments were made at the expense of Mr. Parkes, who we hope will, at some future opportunity, make them public.

The test holes in drained soil indicated no water within four feet of the surface, while in the undrained land the water was only one foot below it. "Many persons," says Mr. Johnson, "who visited me were sceptical as to the advantage of deep draining, but after examining the test holes, invariably went away converts to the deep system."

Mr. Johnson says, "I saved a good crop of fruit this season, which, without covering, I should not have done." This I fully believe, and it is only consonant with the experience and practice of a host of our best gardeners, who have arrived at the same conclusion. Mr. Spencer, of Bowood, uses broad, projecting coping boards, and makes breaks in his walls, to shelter his trees from the cold, cutting easterly winds; Mr. Fleming, of Trentham, has covered nearly all his walls with glass; Mr. Ingram, of Windsor, uses screens to his trees; so also Mr. Tillyard, the clever gardener of the Speaker of the House of Commons; and all succeed, not biennially, but always since they adopted them.

Many of the readers of the *Florist* have, I make no doubt, been startled by the communications of Mr. Saul and his favourite theory of thinning the spurs to give the flowers more "protecting properties," (as Sir H. Stewart would call them), and by this means to ensure crops of fruit in alternate years. Mr. Saul very justly condemns allowing fruit trees to be overcropped, and says that the result of excessive bearing is generally shown in a deficient crop the following year. He is correct to a certain extent, but in this county I can adduce many instances of trees in the villages known as the "Apricot villages," where trees have not failed in bearing heavy crops for many years running, and which have scarcely ever been touched by a knife since they were in the nursery. I can point out to Mr. Saul not only one, two, three, or four instances, but can prove the truth of my assertion in hundreds of them. I think that as regards the Apricot, we gardeners are too fond of the knife, and not unfrequently for appearance sake we remove the fructiferous growths but to replace them with rank, overgrown wood. It is well to occasionally shorten back and thin the old spurs; and who, worthy the name of gardener, does not do it? Why is it that we almost always see the apparently ill cared for and ill trained trees of the cottagers producing fine crops of fruit, and generally much overcropped. It is in my opinion for the reasons I am about to give.

There can be no doubt that the more massively a wall is built, or the thicker it is, even if hollow, the longer it will be in radiating at night the heat it has accumulated during the day. The walls of the

cottages about here are generally built of thick stone, and, in addition to the heat absorbed by the sun's rays, they are warmed internally by the fires of the house; the wall, therefore, of every cottage is, in fact, a hot wall, slowly giving off its heat to the tree trained upon it, and repelling the action of frost, while the projecting thatch or tiles keep all perfectly dry, and arrests the heat radiated from the surface of the wall.

I am sorry to differ from the opinion given by Mr. Saul, but the success of Mr. Johnson bears so much and so forcibly upon the advantages of protection, that I thought it well to advert to it.

Remember, then, gentle reader, that at Strathfieldsaye there is as fine a wall of Apricots as any in the country, which produced no fruit till protected, and yielded a splendid crop the first most trying season after its application.

Auneham Park. HENRY BAILEY.

EDWARDS' REGISTERED EARWIG TRAP.

IN our last number a description of this valuable invention to Dahlia growers was given by Mr. C. J. Perry, of Birmingham, who is well known as a very successful cultivator of the Dahlia. Since the publication of his letter we have visited Birmingham and examined the invention, and found it to be singularly effective in trapping earwigs, and no one should now think of using flower pots, as they are to be offered at a low price, and will be advertised immediately. We now give two illustrations of the trap, to enable our readers more fully to comprehend its usefulness.

The earwig trap is a bell-shaped iron box, preserved from atmospherical injury by being japanned; its colour is a dark shade of olive green; it is three inches in diameter at the bottom, and four inches high.

Figure 1 is a representation of the external appearance of the trap, and Figure 2 is a section showing the internal arrangement. A is a fluted cone, open at top and bottom. B is another cone of plain metal, joined to the top of the cone A, but having a wider base, so that there is a clear space about half an inch wide between the cone A and the cone B. C is a third cone, joined to the others at the top, but spreading at the bottom, so as to leave another half-inch space between it and the middle cone B. D is the outer case, fitting closely round the base of the cone A. E is a moveable cover or lid.

In using the trap, the training stick is placed inside the fluted cone A, the projecting portions of the flutes hold the stick tightly, and there are spaces for the insects to crawl up; a little coarse sugar is placed inside the trap. The insects enter the trap through the opening at the top of the cones, and passing down the outside of the cone C, drop on to the bottom of the case D; they are now effectually imprisoned, for there is no other outlet than the hole by which they entered, to reach which they must traverse the whole up and down route intimated by the dotted lines and arrows in Figure 2, besides which they will have to turn the sharp angles at the bottom of the cones, a process almost

impossible to them from the peculiar construction of their bodies, the legs being all at one end, and the chief weight at the other.

It is our intention to adopt this new earwig trap for the forthcoming Dahlia season, and we earnestly recommend all growers to secure a supply before the season commences.

FIG. 1

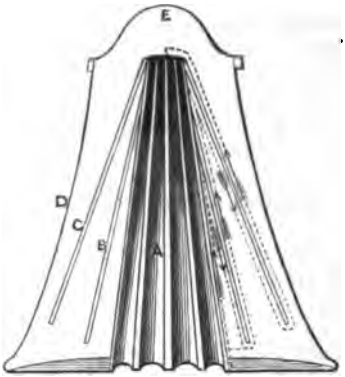


FIG. 2

The inventor, Mr. E. Edwards, of Birmingham, in a circular just issued, offers the following remarks :—

"Earwigs are the most destructive insects that the florist and horticulturist have to contend against; they feed chiefly upon substances containing saccharine matter, such as the most luscious fruits, and the tender petals of flowers; they never feed in the day-time, but as evening closes in they begin to move, and they are in constant activity during the night. Their bodies being a favourite food of all kinds of birds, an instinct of self-preservation induces them, on the approach of daylight, to seek for dark, close, and safe places to roost in during the day, and it is singular that they always climb as high as possible in search of such places.

"Taking advantage of this instinct, the plan hitherto adopted for their destruction has been to place an inverted flower-pot containing a little moss, or other soft material, on the top of the training stick, these pots being examined daily, and the earwigs killed. This has been a very troublesome and ineffectual remedy, for it was found that many escaped. The appearance, moreover, of the pots, was so downright ugly, and was such a disfigurement to an otherwise tastefully-kept garden, the wonder is that the Dahlia has not been excluded altogether from ornamental gardens.

"The little invention now offered to the florist will obviate both these objections. It is ornamental in shape, forming an elegant terminal to

the training stick, and being japanned of a fine neutral tint of olive green, it is a pleasing object to the eye.

"Its utility is no matter of speculation, as it was thoroughly tested during the season of 1855, by one of the most eminent Dahlia growers in the kingdom, whose report on the subject appears in the *Florist* for October in that year. It may, however, be mentioned here, that as many as sixty earwigs were caught in one trap in a single night."

CLIANTHUS PUNICEUS.

It appears somewhat strange that this fine Leguminous plant is so seldom seen in that degree of perfection which its exquisite habit and charming racemes of inflorescence so richly deserve. Perhaps a few remarks on its cultivation may prove a word in season to some of your readers.

This fine plant was introduced from New Zealand in 1832, and is probably better adapted for training against a conservatory wall than any other situation. It may be easily struck from cuttings in any ordinary propagating pit, and when rooted should be shifted into 48 pots, in soil composed of loam, leaf-soil, and sand. It should then be kept near the glass in a close pit, or other structure where a growing temperature is maintained.

In the course of six or seven weeks they will be well-established plants, suitable for immediate removal to the conservatory border. The soil should consist of good calcareous loam and good half-decayed leaves, to which should be added sufficient burnt clay, or other porous material, to keep the soil in a good healthy condition. It now requires to be plentifully supplied with water at root, and frequently syringed over-head, with the usual course of stopping, tying, &c., as occasion requires.

In the autumn, water should be partially withheld, in order that the tissue of the plant may become consolidated or ripened sufficient to carry out, in the following spring, the brilliant effusion of drooping scarlet pea-shaped flowers, which will assuredly ensue if the above directions are carried out.

Henry Munro.

Clevelands Gardens, near Lyme Regis, Dorset.

Tecoma fulva.—This is Bignonia fulva of Cavanilles, a handsome plant, with clusters of long yellow tubular flowers, streaked with red. A good figure of it is given in the "Botanical Magazine" for February last. It was raised by Messrs. Veitch.

REVIEWS.

Rendle's Price Current and Farm Directory.

More than a hundred pages of sound practical information on farming matters—such is the "Farm Directory," a work that should be read by everybody who has a bit of farming land. From page 10 to 30 is devoted to the history, culture, and uses of all the chief Grasses, Turnips, Mangolds, Clovers, Carrots, &c., used in agriculture, telling us which sorts are best suited to certain soils, and giving just the sort of information a purchaser wants. "A Few Words on growing Carrots from Seed," and forthwith we are told, that "It is not desirable to sow Carrot seeds in the open fields until the temperature of the earth is raised to such a degree as to impart warmth to the soil. If sown too early the weeds will have the ascendancy, and completely smother the tender plants. Before sowing, the seed should be sprouted, by steeping it in moist sand. This will be found to be an excellent plan, but the seed and sand must be very frequently turned, so as to prevent heating. Carrot seed should never be sown in very dry weather, the best time being just after a gentle shower. It should not be put into the ground until the third week in April or the first week in May." Messrs. Rendle and Co. observe at page 27, with regard to the Lentil (*Ervum lens*),—"This is of great antiquity as the food of man; it was in esteem in the days of the patriarchs, and is much prized even at the present day; it possesses the most nutritious qualities, and the invalid food advertised as 'Revalenta Arabica,' is nothing more than the flour of the Lentil. It is grown to a considerable extent on the Continent, as well as in our own country." If such is the case—and we have no reason to doubt it—it is highly interesting to note that one of our old articles of food, so often named in the Bible, should in the nineteenth century be again found a useful article for food. A few hints on testing guanos and superphosphates follow, together with a "Calendar of Farming Operations for the Year," and various papers on farming subjects, by Mr. J. B. Lawes, and other eminent practical men. One of the most interesting papers is that on "Capital needed in Agriculture," which will be read with interest. How so much is prepared and published at the small cost of sixpence to the purchaser, is a mystery.

The Ferns of Great Britain and their Allies, by Thomas Moore, F.L.S. Edited by Dr. Lindley, and Nature-printed by Henry Bradbury. London: Bradbury & Evans. Nos. 5 and 6.

We have before noticed this valuable contribution to botanical science at page 279 of our last year's volume, and the favourable opinion we recorded of the numbers then published is fully confirmed by those now under review, which secure to us representations of this interesting group of plants perfectly life-like, and such as no other process could produce. The assistance which Nature-printing is calculated to afford the botanist can scarcely yet be determined; but, from what has already been effected in the work before us, we venture to say, the time is not far distant when Nature-printing will be the means em-

ployed to communicate the forms and structure of vegetation to all classes, and thus prove the means of increasing our knowledge of vegetable life. It is surprising how little is yet known of the vegetation of other climates, or even of our own, by people in general. It is true herbariums (or collections of dried plants) give those who may be fortunate to have access to them a tolerable knowledge of exotic plants; yet, beyond the few who possess this opportunity, but little is known of foreign plants. Nor has, in fact, anything been done towards popularising botany, on a scale sufficiently extensive for its introduction into the routine of an ordinary education—a consummation we hope Nature-printing will materially help to realise. Nor are the advantages of this new *art* likely to end here; for, no doubt, it will give important aid to all interested in the art of designing for the embellishment of manufactured goods. Vast as is the improvement which has taken place of late in this department, by designers selecting subjects, as decorative objects, taken from nature, and more especially plants, the very limited knowledge possessed by artists of the many beautiful and graceful forms met with in Exotic plants, has hitherto prevented their more extensive introduction. We therefore hope Nature-printing will be the means of bringing within the reach of designers a wide field of subjects, which will tend to improve the taste and elegance displayed in our textile fabrics, as well as in pottery, and manufactures in metal. On these, as well as on grounds purely botanical, we hail its introduction to Britain as an important event to art generally; and, as such, the editor, writer, and printer, are alike entitled to our praise for the manner in which the work is brought out, which, we hope, is only the forerunner of similar works having the same object in view.

The present numbers contain figures of different kinds of Lastrea.

HORTICULTURAL THERMOMETERS.

Good thermometers are but seldom to be met with amongst cultivators, yet how essential it is that we should be able to ascertain to what temperature our stoves and greenhouses descend on cold nights. Scarcely two thermometers are found to be correct; indeed, if we happen to possess half a dozen we are only puzzled by finding we have half a dozen different results. Too much stress cannot be laid on the importance of having good instruments, for gardeners are too apt to consider, if they happen to have a thermometer, that it must be a good one; unfortunately, good ones are few and far between. Then, again, how seldom do we find self-registering thermometers in use in our hothouses, although their great utility in recording the extremes of heat and cold, especially the latter, in winter, cannot by any one be questioned. Feeling the want of a really good instrument, I stated to Messrs. Negretti and Zambra (the celebrated opticians of Hatton Garden, London), my desire that they should turn their attention to the con-

struction of a thermometer which should be correct within half a degree at any part of its scale, and yet capable of being sold at a reasonable price. It frequently happens that after a time, the exposure of an instrument to a damp warm atmosphere will induce Confervæ to grow upon it and thus obliterate the index; therefore it seemed requisite that the scale should be raised, in order to prevent the destruction of the instrument by this troublesome pest. This was a point strongly urged with these opticians, and I am happy to be enabled to state that Messrs. Negretti and Zambra have succeeded in producing a self-registering thermometer, which they can warrant correct within half a degree in any portion of its scale. The instrument is placed on a metal stand, and the scale itself is raised metal, whilst the price is only three shillings and sixpence. It is now, therefore, within the reach of every gardener to possess a really good and trustworthy instrument for every greenhouse or stove. The "Horticultural Thermometer" is so good that when well known it must become universally adopted.—*E. J. Lowe, Esq., F.R.A.S., F.G.S., &c.*

CALENDAR FOR THE MONTH.

Auriculas.—The powdered foliage of this early spring flower has already expanded, which, without being as attractive, is almost as interesting as the flower. Cover the glass carefully at night in frosty weather, the young growth being tender, and the flower buds will be developing. If the top-dressing has been done as recommended last month, watering and giving air will be the principal things to attend to for some time to come. As aphides generally appear with the young growth, the plants should be subjected to one or two good smokings with tobacco or tobacco paper.

Azaleas.—Pot, if not already done, young plants; stop and tie out shoots, and place them in heat. Thrips are troublesome pests to Azaleas; look out for them and fumigate two or three evenings successively; this will rid the plants of them; but for small plants the best plan is to dip them for a few minutes into tobacco water, this will clear the plants of thrips. Attend carefully to the watering of large specimen plants; give them plenty of air on fine days.

Camellias.—Those plants that have been in a little heat will be done flowering and commencing growing; they should be syringed freely, and should occasionally be watered with liquid manure. Any plants in rather small pots which are full of roots may now be shifted, but this operation is in general better performed at a later period.

Carnations and Picotees.—The soil for blooming these plants in having been sweetened by the frost and frequent turnings, and the pots having been cleaned, potting may be commenced with the first fine weather. We have so often described how this is most effectually performed, that it is only necessary to remind our readers, that now is the time for the operation of potting them into their blooming pots, for

particulars of which we refer them to previous volumes. It is yet too early for planting into beds or borders.

Cinerarias.—Re-pot succession plants for late bloom. Few plants grow so rapidly as the Cineraria does at this season of the year, and in consequence require plenty of growing room, light, and air. To form good shaped plants, the principal shoots should be tied out and arranged similar to the plan adopted for forming handsome plants of Pelargoniums. The Cineraria will always please best if flowered early.

Cold Frames.—All bedding and other plants that have been wintered in their cutting pans or boxes should be potted off without delay; when potted, place them in a frame by themselves, or at one end of the frame, so that they can be kept rather close for a few days, until they begin to get established, when more air should be given to them. Except on frosty or wet days remove the lights daily off of established plants in pots. Mignonette, Stocks, and Violets should have plenty of air.

Conservatory and Show-house.—These ought to be now a blaze of flowers. Besides those plants mentioned before, Indian Azaleas, Cinerarias, Pelargoniums, Epacrises, Acacias, &c., will now be coming into flower. Begonia manicata is also a very useful plant at this season. Attend to the tying up and training of climbers. Give air freely on mild days. More watering will now be required. Keep everything as clean as possible.

Cucumbers.—Attend carefully to the plants in bearing; pinch off all fruit not required to swell. Under the increasing influence of solar light, they will require more liberal supplies of water; and they should occasionally have some liquid manure. Train, stop, and thin shoots. Plant out young plants, and see that they have a steady bottom heat. They will not need much water for a few days. When they have fairly started growing they will want good supplies of water. Whether trained to a trellis or grown on a bed the shoots will require proper attention in thinning, training, and stopping. Do not leave too many shoots; never let them get crowded. Bear in mind, every leaf ought to get solar light. A soil composed of turfy loam, leaf-soil, and some rotten dung answers well for Cucumbers. Keep up a moist growing atmosphere, and give air as freely as the state of the weather permits.

Dahlias.—March is the month for propagating the Dahlia. It is necessary, however, that the roots should be at work at least a month before, to ensure a plentiful supply of cuttings during this month. If a few strong plants only are required, the roots may now be started in a vinery, and divided when the shoots have grown a few inches long. Pot roots may also be put to work towards the end of the month. These make one or two good plants each without trouble, if properly managed. Many prefer them to spring-struck plants. Soft-eyed or thin flowers produce finer bloom from large roots divided, or pot roots; but very full varieties, or such as are liable to produce green centres, bring the most perfect flowers from plants grown from cuttings. The end of the month, sow seed.

Flower Garden.—Look over the stock of plants, and see if you are likely to fall short of anything at bedding out time; if you are, and can

take off a few cuttings, do so without delay, and put into heat; they will soon strike root, and if potted off and pushed on, will be ready at bedding time. Cupheas, Lobelias, Verbenas, Petunias, and similar plants may still be propagated. Bring forward creepers and annuals, such as Phlox Drummondi, for planting out when the season arrives. If the soil in any of the beds requires replacing with fresh, it should be done without any loss of time; also any turf to be laid should be finished as soon as possible. Plant and cut Box edgings, turn gravel on walks.

Forcing Hardy Shrubs.—As soon as you remove any plants in flower, fill up their places with others. Roses will now flower well, also Lilacs and Deutzias. Weigela rosea forces well. Introduce good plants, full of buds, of hardy Azaleas, Kalmias, and Rhododendrons; nothing looks more showy than they do when in flower. Keep up a moist atmosphere, and give air in fine weather freely.

Forcing Ground.—Keep up the succession of Seakale, Asparagus, and Rhubarb, also of Mustard and Cress. Sow French Beans, Tomatoes, Capsicums, Sweet Marjoram and Basil, and put into heat. Sow Celery and prick out that sown last month either into boxes or into a frame where there is a little bottom-heat and some nice soil; keep close until they begin to grow, then expose freely in fine weather. Water Potatoes in pits. Sprout Potatoes and plant when ready. Put some roots of Mint and Tarragon into heat.

Fruit, hardy.—No time should be lost in seeing to the protection of wall trees. Mats, canvas, or calico make a good covering. They should be so contrived as to be put up or taken down at pleasure. They should be let down every day, except in severe frosty weather, cold cutting winds and snowstorms, as trees in flower require all the light and air they can get. The branches of Spruce Fir make an excellent covering, but they should be put on very carefully, so as not to prevent the sun and air getting to the blossoms; this is easily managed by getting branches not very full of foliage, and thinning out some of the side shoots; they should be put on so as to stand out clear two to four inches from the blossom; this will break the frost and yet admit sufficient light and air to the blossom. They should not be put on until the flower-buds are beginning to open; if put on then, they will hold green and good until the fruit is set, by which the foliage of the boughs will begin to wither and drop. We know of no better protection for fruit trees than this is, when properly put on.

Greenhouse: Hard-wooded Plants.—All young growing plants may now be shifted; have the pots clean and well drained. When potted, they will not require much watering for some time; and when they are watered, it should be with the greatest care and attention. Syringe occasionally in bright sunny weather. It is not necessary to mention the several kinds of plants that ought now to be shifted, as all young growing stuff in small pots will be benefited by it. A compost of peat, turfy loam, and a little silver sand will suit many kinds; but there are some families that require more peat than others, and others that require more loam, &c. In shifting plants, if the old balls be very dry, they ought to be placed for a short time in a tub of water, before

they are potted. Heaths will now require shifting. All newly potted plants should be kept rather close for a time, but they should have air freely when the weather is fine. Guard against cold currents of wind. *Soft-wooded Plants.*—Specimen Fuchsias will now require liberal supplies of water. Stop any loose straggling side shoots that may be taking the lead. Shift scarlet Pelargoniums intended for decorating; also Cupheas, Heliotropes, Salvias, &c.; start Dielytra spectabilis. Hydrangeas are very little grown in the country, which has often been a matter of surprise to us, as they are grand objects, are very easy to grow, and last a considerable time in flower. Indeed, by having a good stock of plants, and introducing a few at a time into heat, they may be had in flower eight or nine months in the year.

Hollyhocks.—As it is a month before these can be planted out with advantage, re-pot any that are getting pot-bound. Transplant seedlings, and continue to put in cuttings for late bloom.

Kitchen Garden.—There must be no delays, no procrastination, no putting off till to-morrow. Every advantage should be taken of favourable weather to get in crops of all descriptions. The actual conditions of the ground now, will, in great measure, depend on the trenching and ridging it received in October and November. The principal crop of Onions should be got in as soon as the ground is in a fit state; the best sorts are—white and brown Spanish, James' Keeping, Globe, and Deptford. The principal crop of Parsnips should also be got in as soon as possible, and towards the end of the month the principal crop of Carrots should be got in. Sow Parsley, Spinach, Early Horn Carrots, and Early Dutch Turnips. Sow Radishes every two or three weeks. Sow Lettuces of sorts, Cauliflowers, also Walcheren and Early Cape Broccoli. Sow the main crops of Brussels Sprouts, also Savoys and Borecole. Sow Leeks; sow Peas and Broad-Beans twice during the month; sow herbs of sorts. When the soil and weather are favourable proceed with planting Potatoes; plant Ash-leaved Kidneys in rows from two feet to two feet six inches apart; you can then plant Brussels Sprouts, Borecole, and Broccoli between, and the Potatoes will come off before the plants get any great size. Plant out in mild weather the Peas and Broad Beans raised in pots and boxes; rod the Peas as soon as they are planted. Plant, if not already done, Artichokes, Rhubarb, Seakale, Asparagus, and Horse-radish. Plant out of frames Cauliflowers and Lettuces. Plant out Cabbages and fill up vacancies in the autumn-planted ones. Strawberry plants laid in in nursery beds since the autumn should now be planted out on some good land. Keep a keen look-out in frosty weather, and protect all tender growing crops. Cut Box edgings, and clean walks, and get every place into as good order as possible.

Pansies.—Plant out such as have been wintered in pots. Top-dress autumn-planted beds, and plant out any late sown seedlings that have been wintered in pans.

Pelargoniums.—What an exciting time for the exhibitor! By the end of the month he will see if his plants will be in flower by the first show, or not. If east winds prevail, the "May" plants must be fired a little, but this must be done with judgment. Watering, giving air,

and keeping the plant clean, both of green fly and dead foliage, will be the principal things to do. There will, however, be some tying out of the shoots of late plants. Fancies should now have a little extra warmth, and seedlings all the room that it is possible to afford them.

Pinks.—After stirring the surface of the soil, top-dress the beds with good rich stuff, choosing an opportunity when the beds are dry. Any vacancies caused by the winter should now be filled up, either by those wintered in store pots for the purpose, or from stock beds. If the soil has been much loosened by the action of the frost, press it firmly round the plants when dry, but not before.

Pinery.—Many of the large plants will now be "showing." When in bloom keep the atmosphere rather dry; by this means you will get perfect and handsome shaped fruit. See that the bottom heat is always regular. The whole of the young stock should be potted some time during the month; choose calm, mild days for the job. Strong vigorous plants with good healthy roots may have a liberal shift. Pines will grow in almost any soil not too gravelly or chalky. A mixture of turfy loam and a little rotten dung answers admirably. Peat soil or "bog," where it is plentiful, may be used, as Pines grow and fruit remarkably well in it. When potted, plunge in a steady bottom heat of about 85°, and keep a moist growing atmosphere, but do not water until they begin to fill the pots with roots.

Roses.—Do not allow the very premature state of the Roses to induce the commencement of pruning, as this can only tend to increase (what we fear a late frost will constitute), the evil. But should a reference to former calendars show directions for partial pruning—*i. e.*, the cutting out superabundant shoots—we *now* say, delay it altogether till the end of the month at the earliest. *Planting.*—Unless this is concluded at once, all hope of bloom this year must be abandoned. *In pots*, too, the plants are very forward, and our old enemies, green fly and maggots, are not backward. Death or victory, must be the motto.

Tulips.—As we must yet expect frosty nights, keep the wet from getting into the hearts of the plants.

Verbenas.—Good healthy cuttings put in now will be in ample time for flowering, either in pots or for bedding out. Healthy young plants will succeed better than a large old stunted one.

Vinery.—It has been favourable weather lately for early forced Vines Vines in flower the latter part of January ought to have set well, as we had many sunny days. Keep a moist atmosphere in the early house until the Grapes begin to colour, but always mind and give a little air in good time in the mornings, and in fine weather increase it freely in forenoons. Attend to thinning the berries in other houses as soon as they are set. Attend to disbudding and tying down the shoots in late houses. Keep a moist atmosphere in all except when in flower, when it should be rather dry. Water liberally all inside borders, and occasionally with good liquid manure.

Erica. s
1. *E. Spencerii*
2. *E. Exoniensis*
3. *E. Andrewsii*

J^no Andrews Delt & Linco

Printed by C. Hull

CAPE HEATHS.

(PLATE 112).

How beautifully compact and ornamental in their growth are most of our varieties of Cape Heath! They are easily grown, too, and remain a long time in blossom, which, with a few well-selected kinds, may be kept up nearly the whole year round. Although in-door gardening loses much of its interest in summer, when Nature is so prodigal of her beauties in the open air, still, even then, pleasure may be derived from an inspection of the section of Cape Heaths which flower at that season; and in winter and spring, when there is little in the way of flowers to induce us to stray beyond the walls of our little greenhouses, these afford us a source of real delight; for who can look upon their deep green leaves and charmingly polished waxy blossoms of various forms, when there is little else to cheer us, without a feeling of satisfaction? And some of them may always be had in flower, even in the dull months. Such being some of the many recommendations belonging to this tribe of plants, we therefore offer no apology for introducing our readers to three new and excellent additions to this useful genus. Their colours, it will be seen, are brilliant and well contrasted, and their flowers conspicuous and striking. For the opportunity of figuring them we are indebted to Messrs. E. G. Henderson, of the Wellington Road Nursery, St. John's Wood. They were raised from seed, we believe, by the late Mr. Story, whose improvements on the Fuchsia and other popular flowers have often been the subject of remark in our pages.

Much as has, however, been done in the way of cross-breds, there is yet one point to which little attention has apparently been paid, and that is, the crossing our tender Heaths with hardy ones. It strikes us, and the idea is not new, that there could be no impracticability in crossing the splendid species of South Africa with the hardy natives that adorn our shrubberies. We need not say that a successful result in that direction would be most interesting, and the additional beauty that would be thus introduced to our beds and borders would more than compensate for the trouble which such an attempt would cause. That much may be done by hybridisation has of late years become marvellously manifest; and surely there can be no obstacle to a union between the tender sorts and the little hardy varieties which we find already everywhere in flower. Let the experiment be but fairly tried by skilful hands, and we have little fear of the result.

As regards cultivation, nothing, we imagine, need now be said, so much having been written on that subject in previous numbers.

HORTICULTURAL SOCIETY.

THE adjourned general meeting of this Society took place on the 11th of March, to receive the report from the committee appointed at the preceding special meeting, "to investigate the Society's accounts, and report on what is best to be done as to the continuance of the Society." After some discussion, the original motion, for adopting the report, was lost; and an amendment carried, that the report be referred to the Council, to consider and report on it to the next adjourned meeting, to be held on March 31. We believe this was all that could legally be done, as, according to the Society's charter of incorporation, the management of the whole of its affairs is vested absolutely in that body.

We abstain this month from making any comment on the report which the committee drew up, reserving our remarks until we see what is really to be done with the Society, which we presume must be settled one way or the other on the 31st inst., a day too late for us to apprise our readers of the result. There can, however, be no harm in appending a few suggestions of our own, which may be worth consideration, if the Council decide to retain the Chiswick establishment.

In the first place it is certain that the Pomological department of the gardens is the one which has conferred most credit on the Society, and proved of most benefit to the Fellows and the country generally. Notwithstanding this, it has failed of late years to keep up with the requirements of pomologists; and an independent society has been established, with every prospect of its fulfilling the intentions of its promoters. It cannot be questioned that if the Horticultural Society had paid more attention to this department than they have lately done, a Pomological Society would not have been needed. Now we see no reason (supposing the Pomological Society agreeable) why a union should not be effected between the two—*i. e.*, that the Pomological Society should merge into that department of the Horticultural Society. If combined together, the advantages to those Fellows of the Horticultural Society attached to Pomology would be increased, and the members of the Pomological Society would likewise be benefited by the union. We would suggest a new class of Associates belonging to this department, which should also comprise those members of the Pomological Society who might wish to join, under the name of *Pomological Associates of the Horticultural Society*, allowing them the privilege of attending the exhibitions of hardy fruits, of having the Society's reports on fruits, and a share in the distribution of grafts, &c. The subscription might perhaps be the same as is now paid by the members of the Pomological Society, or, as the privileges would be greater, raised to 15*s.* or 21*s.* per annum, with a guinea for the admission fee.

The mode of obtaining correct information as to the value of orchard and other hardy fruits, whether in reference to their quality, productiveness, or hardiness, as practised by the Pomological Society, is much more comprehensive, cheaper, and altogether better calculated to

attain the object in view, than the *trial* system adopted at Chiswick. That a considerable space of ground (if thought desirable) might be dispensed with (if the former system were enforced), to be devoted to other objects; and as we have a strong opinion that by widening the basis of this part of the Society's operations a considerable increase of members would be the result, we think it worthy of being considered, in a friendly spirit, by the Councils of both establishments, more particularly as the Horticultural Society already possesses much information on fruits, a valuable set of fruit models, and certainly the best practical pomologist, in the person of Mr. Thompson, in Europe. We believe, on the grounds we have named, if this were carried out with spirit, this department would pay its own expenses, and might ultimately prove a source of revenue to the general Society. To effect this, however, it should be considered as on a separate basis, and kept as a distinct department, except as regards its officers being under the orders of the Council of the general Society.

Next we are of opinion that the arboricultural department might be usefully increased, so as to make it a standard of reference in all matters pertaining to wood and forest management. We are not advocating so much the growth of exotic trees (as the Society has already a very complete collection) as the forming of a collection of forest trees, as well as of such others as may be considered useful in a commercial point of view. To this should be added a museum, wherein the damage done to timber by certain systems of pruning (or by pruning of any kind?), want of judicious thinning, improper soils, and bad drainage, should be illustrated by specimens kept for the inspection of gentlemen and foresters. We apprehend there are very few country gentlemen who know the difference between the two varieties of British Oak, which now occupy public attention; and it is yet an unsettled point with many which is the best variety of Elm for timber purposes. These questions are of importance to gentlemen holding landed property; and as we have in England no Arboricultural Society, we see no reason why some additional space could not be afforded at Chiswick for specimens of forest trees, which, if under proper management, might, by collecting information as to rate of growth on particular soils and exposures, quality and durability of timber, furnish much valuable data, which could be registered for the information of all concerned in planting, whether gentlemen or their managers. We think an addition of members might reasonably be expected to follow a better developed scheme for illustrating, as far as practicable "forest culture" than what the Society at present possesses.

We are not so sure as to our next proposition; but as the Society has ground enough, which it is very desirable should be made useful, why could not a section of the garden be devoted to growing specimens of every kind of agricultural produce? We believe the Royal Agricultural Society has at present no means of examining live specimens of farm produce, growing together, so as to admit of a close comparison and description. Collections of agricultural grains, roots, and grasses might not prove of great practical utility to the farmer, as observation

and experience teach him what the particular class of soil he cultivates is best capable of producing; but to a numerous class among the Fellows of the Royal Agricultural Society a collection of growing specimens of every kind of farm produce would prove of great service. It is the interest of landed proprietors, as well as practical farmers, to make themselves acquainted with every description of plant capable of cultivation on the farm. Among the great variety of farm produce now offered to the public some must be better than others; and although, on the limited scale which under any circumstances could be attempted, no results of great practical value as to superiority could be established, yet a complete knowledge of every kind and variety would be obtainable; and some general and extremely useful information to many would certainly be the result.

We may be too sanguine on this subject, but we think nevertheless some accession of members would follow the introduction of so useful a feature; and that it would prove an interesting department of the gardens, and increase the claims which the Horticultural Society would have on the support of the Royal Agricultural Society and the public generally.

That these schemes would not be attended with any great expense, we feel sure all who consider the subject will agree. Our object in suggesting them as auxiliaries to the promotion of horticulture proper, is to make the most of the gardens—in fact, to make them not only represent horticulture, but every subject connected with the landed property of Britain, whether relating to the farm, the garden, or timber, so that every one interested in landed property might know where to obtain all the information he required relative to his property; and we need not add, we hope, would likewise be induced to support liberally an institution which, under good management, would be calculated to improve his knowledge of cultivation.

Much might be done likewise by a well considered course of lectures on the various subjects connected with the establishment. We think, further, that these in turn might be productive of revenue; but we forbear saying more for the present on this and other subjects connected with the retention of the garden, but wait to see, first, what is the determination of the Council in this respect.

NOTES ON A JOURNEY.—No. IV.

THOROUGH drainage is admitted by all good cultivators to be an indispensable preliminary to the development of those results which may be obtained by increased depth of soil and *aeration*. But the introduction of this system has been met by the most dogged opposition on the part of both farmers and gardeners, of whom your humble servant was one (in earlier days) strenuously opposed to making drains too deep in clay soils. He has, however, long seen his mistake, and has sought and had opportunities of being convinced that both himself and those who do not drain deeply are, or have been, in error.

It ought not to be forgotten that rain-water is charged with salts of ammonia, which are stimulating to the growth of plants. It is therefore desirable that such water should percolate slowly through the soil, and enable the roots to absorb the soluble food thus afforded; but, having parted with its nutritious elements, it should not remain to stagnate and chill the soil, excluding air, lowering its temperature in summer, and raising it in winter—an unnatural course.

I have often seen grass fields injured by shallow draining, producing much less grass than they did before. This arises from the rapidity with which the fertilising summer and spring showers pass off into the drains, with all their nutritious ingredients, while in deeper drains there is time for the roots to assimilate the saline matters.

Shallow drains run quickly and rapidly soon after heavy rains; they discharge turbid water, loaded with the inorganic constituents of the surface soil. Such drains—say at two feet deep—soon become choked with the silt which is washed into them; while deeper drains do not run for some time after, and discharge clear water, minus its nutritious salts, and are not liable to derangement by choking.

I have seen a great extent of shallow drains which were perfectly useless, their annual derangement involving an annual outlay; these I have seen pulled up and replaced by four-feet drains which discharged a pipe full of clear water, the pipe being six inches in diameter, and this, too, in a soil where it was said the shallow drains were too deep.

With the remark that shallow drains soon cease running after rain ceases, I will close this digression upon drainage by referring to the gardens at Strathfieldsaye for an illustration of what I have advanced.

The park at this place is large, but little varied in surface. It contains many fine trees, particularly in a part called "Switzerland," where the Silver Firs are of gigantic size.

The house is a plain and unpretending edifice, quite in keeping with the unostentatious character of the late Duke. All the rooms are fitted up with double sashes, thus economising the heat generated in them, and giving a hint which might be applied with much advantage and economy in other mansions. From the house the ground slopes gently to the river Lodden, immortalised by Pope as the nymph "Ludena." Adjoining the house is a conservatory, in which are two Araucaria excelsa, 22 feet in height—a Dacrydium cupressinum, 20 feet—Eugenia myrtifolia, 20 feet; very handsome specimens. The pleasure-grounds are extensive, but unvaried as to surface. They contain many fine trees—as Cedars, Pines, &c. Among them, the following are worthy of record:—

	HEIGHT.
A very handsome Diospyros Virginiana	50 feet.
,, ,, Tulip-tree	90 ,,
Several Scarlet Oaks	90 ,,
Cedar of Lebanon	103 ,,
Spruce and Silver Firs varying from 80 to	110 ,,
Weymouth Pines	95 ,,
Hemlock Spruce	50 ,,
,, ,, 180 feet in circumference of branches.	

Flowers are but sparingly introduced, but there are fine breadths of

lawn; and, from the number of fine stately evergreen trees, the expression of the place is one of quiet seclusion and solemn grandeur. In various parts of the grounds there are very pretty rustic seats, ingeniously put together, and quiet and unobtrusive in character.

The kitchen-garden is large, and well managed by Mr. Johnson. Pines are grown extensively, and many Providences, weighing 9lbs. each, were cut in the autumn. He is a most successful Cucumber grower. Vines, Figs, and Peaches are grown here; the latter, in a low pit, were in a beautiful state. There are some Pear-trees 15 feet high, trained pyramidally, which are much admired.

Mr. Johnson cultivates his soil deeply. Great advantage results from this practice; exposure to the atmosphere rendering soluble many constituents of soils which are insoluble without the access of air, and the mechanical arrangement of deeply moved and loose soils permits the roots of plants to penetrate freely.

From Strathfieldsaye it is but a short distance to Heckfield House, the charming residence of the Right Hon. the Speaker of the House of Commons; a gentleman most highly and deservedly respected by all who know him, and one of the most liberal patrons of the art of gardening in this country. His gardener, Mr. Tillyard, is an enthusiast in his profession; and, with his perseverance and energy, and the encouragement given to him by his kind employer, great results are achieved.

In the park, in approaching the house, there are some fine Deodars and Pines.

The house is built of red brick, and charmingly situated. It struck me as the beau ideal of the residence of "a fine old English gentleman." As seen from it, the grounds are prettily wooded and undulated, sloping in one direction to a clear and mirror-like piece of water.

The mansion has a terrace-garden in front of it, which was unique in arrangement of colour and high keeping—the variegated Alyssum was extensively and most effectively used. Many improvements are contemplated; amongst others, a considerable addition will be made to the dressed grounds.

All the world has heard of the fine Pears, Grapes, and Strawberries produced at Heckfield, and the London exhibitions have borne high testimony to the superior quality of these fruits. The Pear walls at Heckfield are admirable, and at the time of my visit were profusely covered with the finest fruit. Strawberries are magnificently grown. The whole place abounded with the finest produce of fruits and vegetables. A wall of Peach-trees here vied in health and fine produce with those in the more favoured climate of Arundel Castle. *But these had been protected!*

Heavy manuring, deep digging, and hard cropping are the order of the day here, and the most minute detail of everything that is attempted is well and thoroughly done, and "what is not worth doing well is not worth doing at all."

In a Vinery here there was one of the finest crops of Grapes which I have ever seen. They were perfectly monstrous in the size of the berries, and black as sloes. These were intended for late use, and the

outside border was therefore protected by light wooden shutters covered with asphalted felt. Mr. Tillyard is of opinion that we ought to pay much more attention than is usually given, to preserve the borders of late Vineries from being saturated by the autumnal rains—a hint to which all good gardeners will, I am sure, give unqualified assent.

I shall reserve for the May number of this periodical an account of the admirable fruit-room here.

HENRY BAILEY.

Nuneham, March 20.

FRUIT TREES AND FRUIT TREE PROTECTION.—No. I.

I DID not intend resuming this subject at present, but as Mr. Bailey has, in the last number of the *Florist*, attempted to fasten on me opinions that are not mine, I feel called on in self-defence to offer some remarks. Mr. B. says, "Many of the readers of the *Florist* have, I make no doubt, been startled by the communications of Mr. Saul and his favourite theory of thinning the spurs to give the flowers more 'protecting properties,' (as Sir H. Stewart would call them), and by this means to ensure crops of fruit in alternate years." When or where, I beg to ask Mr. Bailey, have I recommended the thinning of the spurs to ensure crops of fruit in *alternate* years? I ask again when or where Mr. B. found this practice recommended by me? I have *never* advised the thinning of the spurs to ensure crops of fruit in *alternate* years. No. If Mr. Bailey will have the kindness to read my communications he will see that I have recommended the thorough drainage of the land, the thinning of the spurs when *too crowded*, the thinning of the fruit, &c., to ensure good crops of fruit *annually*. Yes, Mr. Bailey, *annually*, and not *biennially*, as you would make me say.

I cannot conceive what Mr. B. has seen in any of my communications that could startle either him, or any of the readers of the *Florist*. I have advanced nothing but what has been much better said before, and by persons far better qualified for the task than my humble self.

Mr. Bailey's remarks would lead one to infer that I rejected all protection, of whatever kind, under all circumstances. If Mr. B. would have the goodness to look into the *Florist* for 1854 he will see that my first article was written in defence of fruit tree protection by canvas rolls and Fir branches, which Mr. Ewing designated the "antiquated plan." In another article of mine, written subsequently, Mr. Bailey will find these words: "When I ventured to defend this plan (fruit tree protection by canvas rolls and Fir branches) I did not then, nor do I now, consider it perfection; far from it." If Mr. Bailey would read those articles of mine, he would see that they were a defence of coverings for *wall* trees, and not a condemnation of them. At the conclusion of the second article above-mentioned, I said, "If the wood is well ripened I would not, nor do I, use them (coverings)." Some correspondents of the *Florist*, who advocated orchard houses and glass cases for fruit trees, in adverting to my articles on canvas rolls and Fir branches, condemned these coverings as inefficient. They wanted

something better. These correspondents attributed the failure of all the fruit crops *solely* to "late frosts and precarious springs." One of them said, "From my own experience I can affirm that Apples, Pears, Plums, and Cherries are all but entirely gone; and, going from the subject, that Potatoes, early Strawberries, and some other crops, suffered equally." In my reply (see *Florist*, 1855), to these correspondents, I asked them if they were prepared to advocate the covering, with glass, in order to save the crops, of all the Apple, Pear, Plum, and Cherry trees in Great Britain. I now take the liberty of asking Mr. Bailey if he is prepared to recommend his protection for all these trees to save the crops. After showing, in the article just mentioned, how preposterous such a proposition would be, I said, "We must, therefore, adopt those means which, even in our variable climate, will remunerate the grower, and at the same time place these fruits within the reach of all." I also said, "This is to be done, not as those correspondents would do, by covering all our orchards with glass, but by taking a lesson from M. de Jonghe, as to pruning, selection of scions, &c., and paying attention to the soil, that is, in raising its temperature by drainage and other means, in improving its texture, &c., and by selecting such sorts as are suitable for the localities." And again I said, "My own opinion, founded on experience, is this—that throughout the length and breadth of the British Isles, by proper attention as to the selection of stocks and sorts, by proper attention to soils and localities, and by performing all the operations connected with the planting and growth of trees from early infancy to old age; I say by these means we can produce a supply of all our fruits equal to the wants of our population."

Is there anything in all this to startle Mr. Bailey? When I wrote the above, I did then think, and do so still, that to recommend protection for our orchards would be the height of absurdity. I was then of opinion, and am still, that good average crops of fruit could *annually* be secured by good cultivation, by thinning of the spurs when *crowded*, by thinning of the fruit, &c. There is nothing very startling in this. On the contrary, it rests on the very soundest principles.

In the article already referred to (see *Florist* for 1855), I mentioned a few facts to show that the climate is not always the cause of the failure of our crops. One of these was that "In these gardens there is a very old Apple tree—the sort is Sir Walter Blackett's Favourite; it appears never to have anything done to it in the way of pruning, for the branches are as crowded as possible. Well, this tree only bears every *alternate* year; one year it has not a dozen fruit on it: the following season it is bent to the ground with its load of fruit. This has been the case for the last six years to *my* knowledge, and I am informed it has been the same for 20 years before." I now ask Mr. Bailey, as I then did the correspondents to whom I was replying, if he really thinks this tree misses a crop of fruit every other year in consequence of our "precarious springs." No, Mr. B., that is not the cause. It is because the crop of one season robs the tree of all the organisable matter fit for the formation of fruit, so that it takes a year to store up sufficient for another crop. This tree had several bushels of fruit on it in 1854, but not one single Apple in 1855;

I shall be surprised if it does not have a heavy crop this season. Does Mr. Bailey see anything very startling in this? Now, I ask, are not too many of our orchards something like this tree—"overloaded with spurs," as M. de Jonghe says! "In fact," as the editor of the *Gardeners' Chronicle* remarks, "Orchardists never dream of removing them; the more they have the greater they fancy is the chance of a good crop; they are like those speculators who, in their eagerness for immense gain, contrive to realise nothing." Another fact I mentioned was, "That in these gardens there are six trees of Calville Apple; five of these trees have been regularly pruned, the other one never. Their situation is similar in every respect, yet the one not pruned has not for the last six years had anything like a crop of fruit, whilst those pruned have never failed to bear an average crop." The third fact stated was, "Here are nine trees of Manks' Codlin Apple; for the five years previous to 1854 they had no fruit except a very few misshapen ones. These trees have been *covered* with spurs, and nothing could exceed their beauty when in blossom; but year after year no fruit except, as just observed, a few misshapen ones. A pressure of other engagements prevented me from giving them any attention until last spring. I was well aware that thinning of the branches, thinning of spurs, and thinning of blossoms and fruit, was sound practice founded on science. Our grandfathers knew this, and some of them followed it, though, unfortunately, it has not been carried out so fully as it ought to have been. Well, then, I cut off a third part of the spurs of some of the trees, and more than that of others, and the result is I had the past season a fair crop from all the trees, and the fruits were particularly fine and well formed. One tree, the smallest of them, which was operated on very freely, in order to get it to grow, was much admired by many gardeners who called here during the season; the fruit on it was very fine. To the pruning of these trees last spring I attribute the crop of the past season." I can now add that the crop the second year after the operation (that is the crop of 1855) was even still finer. In the article from which the foregoing extracts were made, after stating one or two more facts of similar import, I said, "Had not this article already extended beyond all reasonable limits, I could adduce scores of facts similar to those mentioned, all showing that with proper cultivation we may in nine years out of ten expect average crops." Can Mr. Bailey find anything in this that he can misconstrue into "to insure crops of fruit in *alternate* years?" No, he cannot. Neither can he find anything very *startling*. Nor can he find that I have ever condemned the use of canvas coverings and Fir branches for wall fruit trees, nor of glass cases, if people like to go to all that labour and expense. But I have contended, and do still, that by thoroughly draining and improving the land, a proper selection of stocks and scions, a proper selection of sorts, careful attention to pruning and thinning of the wood and spurs when *crowded*, and above all, never, on any account, allowing the trees to bear *too heavy a crop*; by these means I am fully persuaded, from all my observations and experience, we can, no matter whether the season be late or early, secure good crops of fruit in nine seasons out of ten; not in *alternate* seasons, as Mr. Bailey would make

us say. And, with respect to wall fruit trees, such as Peaches, Nectarines, and Apricots, I have never condemned the use of temporary coverings for these; but I did say, and I repeat it now, and every day's experience tends more and more to confirm me in this opinion, "If the wood is well ripened I would not, nor do I, use them (coverings)." Does Mr. Bailey see anything very startling in this? Mr. B., in his interesting "Notes on a Journey," has informed us how *thin* that very clever gardener, Mr. M'Ewen, kept the wood on his fruit trees; that it was hard as whalebone, and that one of Mr. M'Ewen's maxims was to do all necessary pruning in summer. This is what I have always contended for. I have over and over again insisted on the necessity of having all fruit tree borders well drained; I have insisted on the necessisty of proper and timely disbudding of shoots, thinning of fruit, &c., in order to get the wood well ripened. I have said that with well drained borders and well ripened wood we would secure good crops of fruit in nine seasons out of ten. Whereas, if the borders are undrained and the trees neglected as to thinning, disbudding, &c., so that the wood never got properly ripened in one season out of ten; I have said that when this was the case late springs would not ensure good crops, *not even with coverings*. Spring frosts are often blamed for the failure of crops, when the *real* cause often is *unripened* wood and imperfect blossoms; I have scores of times noticed cases of this kind. When the wood is well ripened, and the blossoms are perfect, so far from regretting having some of the flowers killed by frost, I think it a great gain, for by some of the blossoms being killed they do not rob the tree of any of its organised matter, consequently there is more left for those that remain, which will be much finer; and by there not being too many, the trees will make better wood, and will be prepared to bear a crop of fruit another year. Now, if a tree that has the wood well ripened, is protected, it will generally happen that so many fruit set, that oftentimes four-fifths, and sometimes a great deal more, has to be thinned. Now, these fruit, if only the size of Peas, will have robbed the trees of some of their organised matter. The Apricot trees here are now (March 13th), in sheets of blossoms; if forty-nine out of every fifty were killed by the frost, there would even then be four times too many for a crop.

In the number of the *Florist* for August last, I said, "The crop of Apricots in these gardens is very good, and as the fruit has for several years been regularly thinned, I have no fear as to the results another season, whether late or early, precarious or otherwise." The prospect at present is most cheering, and I anticipate having the pleasure in a few weeks of thinning many quarts of young fruit. Mr. Bailey will perhaps say, don't count your chickens before they are hatched. If my other work allowed, and I could spare the time, I would thin the blossoms now, so as to prevent them from robbing the trees. I may here mention that the Apricot crop this season promises to be a very heavy one in Yorkshire. Everything is three weeks earlier than it was last season, which was a late one. The Apricot crop was a failure last year in Yorkshire, though the spring was a late one. This militates against Mr. Bailey's theory of retarding, and confirms the opinion I have so often

expressed—that failure of crops was often owing to excessively heavy crops the previous seasons, which rob the trees of their organised matter, so that they require a season of rest to store up sufficient for another crop. The Apricot crop in Yorkshire in 1854 was a *very heavy* one, and as they were not thinned (except in some gardens) they exhausted the trees of their organised matter, so that in 1855 the trees required a rest to store up sufficient for another heavy crop, which, from present appearances, there will in all probability be this season.

M. SAUL.

Stourton.

WINTER BLOOMING PLANTS.

Luculia gratissima.—This plant is generally acknowledged to be one of the most valuable we possess, whether for the beauty of its flowers or their fragrance; and blooming as it does during the autumn and winter months renders it still more desirable. This plant is thought by some to be difficult to manage as a pot plant, and certainly it is very impatient of extremes when growing, disliking alike cold draughts and scorching sun, but as these are easily avoided it need not deter any from attempting its culture. Leaving the propagation to nurserymen, we will suppose young plants in February, at which season the previous year's growth should be well matured, and in that case shortened back to three or four inches of its base; they should then be plunged in a bottom heat of about 70°, and that of the atmosphere 10° lower; this will induce a gentle root action. When the buds begin to swell they should be repotted in pots two sizes larger in a composition of nice turfy loam and peat in equal portions, with a little leaf-soil and sand; they should again be plunged as before, keeping a moist atmosphere. Let the temperature be gradually increased to 65° and 70° by day, with shading in bright weather. As they advance in growth they should be assisted with manure water rather frequently, stopping strong growing shoots to induce a bushy compact habit; this must not, however, be done later than the early part of June, for unless there is rather strong and well ripened wood little bloom need be expected. From the early part of August the plants should be fully exposed near the glass in order to ripen the wood; when this is done they will flower freely in a warm part of the greenhouse. If the plants are only required to furnish flowers for cutting, the best way to manage them is to plant out against the back wall of a Vinery or some such place. In the Vinery it will be quite at home, as it will make its growth with the Vines, and with them ripen it, and flower when they are at rest. In this situation all the attention it will require will be to prune after flowering as described above, watering occasionally with liquid manure, and keeping free from red spider, thrips, &c. These pests appear to be remarkably fond of the Luculia, and unless kept in check will soon do serious injury to its foliage, and check its growth.

Rhododendron jasminiflorum.—This is one of the very best hard-wooded greenhouse plants, and will bloom during the winter in great

profusion. Pot firmly in fibrous peat and a small admixture of sand, and place the plants in a temperature of 55° in the spring; keep a moist temperature and rather shady till June, after which inure them to light and air; and as soon as the flower buds are set remove them to the open air for a short time. In the early part of September they will again require greenhouse protection. From this time a few plants should in succession be introduced to a cool part of the stove, where they will furnish a supply of the most beautiful flowers during winter.

Siphocampylus microstoma is a soft-wooded stove plant that deserves more general cultivation, as a succession of its bright scarlet blooms renders it very attractive during the winter months, and flowering as it does at the end of the young wood makes it very desirable for cutting. It strikes freely from the cuttings of the young wood in a slight bottom heat, and if this is done early in the spring they will make nice flowering plants by the following winter. This, like most of the soft-wooded plants, requires plenty of pot room and a liberal supply of liquid manure when growing; in fact the treatment recommended for the Eranthemum pulchellum in a former number will apply in every respect to this Siphocampylus.

Justicia speciosa.—This is another winter flowering plant too seldom met with, for although the flowers are of short duration they are produced in great abundance, and being of a bright rose colour, are very attractive. Little need be said respecting its culture, as the treatment recommended for Justicia carnea will equally suit this. The great point to attend to with most of this tribe of plants is, in the first place to insure a vigorous growth, which must be regulated by frequently stopping in the early part of the season. After this a more free exposure to light and air is wanted, to obtain well-matured wood, to insure their blooming abundantly, and a liberal supply of water to prevent flagging, which, if allowed, will disfigure the plants, by causing the foliage to turn yellow and fall off; and lastly, to prolong their beauty, a liberal supply of manure water must be given when the pots become filled with roots, and continued throughout the blooming season.

THE PEACH.

(*Continued from page* 73.)

As the season advances, the young wood must be kept closely tied or nailed to the wall, and after midsummer, should the trees be crowded with more young wood than can be fully exposed to the light, it should be removed. In fact, now is the proper time for performing what pruning or cutting-out the Peach requires; and therefore the trees should be gone carefully over, and what wood is not required for bearing the following season, or filling up vacant spaces, should be cut away. The wood retained for bearing will thus be more fully exposed to the influence of light, and will become better ripened in consequence, with the fruit-producing buds bolder and more numerous than when the

wood is allowed to become crowded and ill-ripened, through the want of timely summer pruning; this will leave little to be done in the spring, further than shortening back the wood, and perhaps re-arranging some of the shoots.

It will greatly assist the ripening of the present year's wood, if the border can be protected from rain after *August*. Some of your readers may perhaps be surprised at this statement, which is nevertheless true. The Peach is a native of the dry, warm climate of the East, and is found to live longest and thrive best in climates similarly constituted; as in America and the south of Europe, the autumns of which are dry and hot, and therefore well adapted for ripening the wood of the current season's growth, which becomes hard and solid to a degree beyond anything the most favoured season in this country produces. If, however, we can prevent rain from penetrating our Peach borders after about the middle of August, we shall check that luxuriant growth which the rains of our autumns produce, and which, aided by a damp and not over bright atmosphere, is continued often till very late in the autumn, and the results are wood of great strength and greenness without fructivorous buds, and with a strong tendency to gum and canker in the next season. It should, therefore, be the aim of the cultivator to counteract this evil, incident to our climate, by remedies I am endeavouring to point out; viz., shallow and somewhat poor borders, and keeping the latter dry during the autumn and winter. No fears need be entertained that the trees will suffer in consequence; if it appears to stop the growth of the wood (which will hardly be the case all at once, unless the border was previously very dry), so much the better; you will have obtained an important step towards success, as by this the wood will have time to ripen better, and to form fruit-bearing buds in greater abundance. We need scarcely point out how this can best be effected—a coating of concrete spread an inch thick over the border, is an easy, and to some an inexpensive, method; while slates, tarpauling, and various other contrivances, may be employed by others; it matters not how, so long as it is done in some way. The borders I have recommended are narrow, for one reason, that they may more easily be protected from rains. In this operation, some regard must be had to the peculiar locality of the situation. For instance, on the east coast—say from Norfolk to Hampshire—much less rain falls than on the opposite coast, or even in the midland counties; and in such places the precautions I am advocating are not so imperatively necessary as when the climate is wet, a condition generally accompanied by a cloudy sky, rendering the ripening process more difficult, and therefore a *dry border* indispensable for obtaining well ripened wood.

Towards the middle of October, the leaves will be fast changing colour, provided the wood is in that state of forwardness we expect, and as they are readily detached, they may be brushed off with a few sprays of birch tied together. This will admit the air more freely to the wood, and when the greater part of the leaves are fallen off, unnail or loosen the present year's wood from the wall; this will freely expose them to all the weather, and if the wood is (as I take for

granted it will be), well ripened, no harm will follow: on the contrary, the wood will become hardened and of a dark red colour, and the buds, in the spring, will open strong, and will be but little likely to fall off, or fail in setting their fruit.

The beginning or middle of March will be quite time enough to cut back the wood and tie in to the wall. The great object just now is to keep them from blooming too early, and the longer, therefore, they remain free from the wall, the less liable will they be to get into bloom. In shortening the shoots back, some regard must be had to the age of the tree. Young trees will require all the leading shoots left nearly their whole length—say, shortened back one-third—while the secondary and subordinate shoots must be cut back, some one-half, and others two-thirds of their length. With older trees, the whole will require closer cutting in; more especially when the trees are fully developed, when it will perhaps be necessary to cut back most of the shoots to one-third of their length, and even, in places, closer than that. In cutting back, select what is called a triple eye, or bud; that is, where there are two fruit-buds with a leaf-bud in the middle, as these generally break stronger than when cut to a single wood bud. Great care must be taken to secure a wood bud to cut back to; as, should this not be the case, and only blooms produced, you will lose perhaps the best part of the shoot, and what fruit forms above the growing shoot will be worthless. There are some Peaches—as the Bellegarde, Chancellor, and others—which, when in a full bearing state, produce wood-buds very scantily, except as terminal ones, and a few at the base of each shoot. In this case, the shoots must not be shortened back at all, but left their entire length, and when they break they must be gone over, and cut back, or not, according to the position and number of buds.

After tying in the wood, remove the covering from the border, to allow it the benefit of rains, and a surfacing of fresh loam may be laid over and very slightly forked in, but further than this the border should not be disturbed. In the course of time, however, as the borders may become exhausted, a good mulching of cow or sheep dung will assist it; or, what amounts to nearly the same thing, two or three soakings of manure water from *a cow-yard*.

A GARDENER IN THE COUNTRY.

LIGHT—ITS INFLUENCE ON VEGETATION.

(*Continued from page* 41.)

WHETHER the principles contained in the sun's rays influence vegetation, as some writers affirm, according to the season when their different properties are most active—or whether, as I have previously suggested, plants themselves possess the power of calling into action these properties, according to their stage of growth, under circumstances different from those which occur when vegetating at their natural season, I leave for the present, as not materially affecting our

question, and therefore proceed shortly to notice some of the secretions of plants.

It must be obvious to the most common observer, that the peculiar products of plants vary, as much as do their flowers or outward appearance. The exquisite fragrance of some is only equalled by the most offensive odour of others. While some produce the most delicious fruits, others cannot be tasted for their nauseating qualities. One class furnishes us with food so indispensable to our very existence, that the epithet "staff of life" alone adequately conveys to us their importance; while, again, we find others producing the most deadly poison; while the various other ingredients found in plants—as gum, sugar, starch, tannin, resin, albumen—show how widely different are their secretions. But whatever these may be, they are all dependent on the subtile agency of light for their formation, and the qualities of their respective products are increased, or otherwise, as the plants producing them have been fully, or not, exposed to its influence.

It follows, then, that by a vital function, common, in a greater or less degree, to the entire vegetable kingdom, plants are enabled, under the influence of solar light, to decarbonise the air in which they grow, and by assimilating the carbon (found in the atmosphere combined with oxygen in the form of carbonic acid), they furnish themselves with the principal material for building up their own structure from the air, and likewise for forming the base of such carbonaceous compounds as oily matter, sugar, gum, and starch, found in all plants. In connection with the decomposition of carbonic acid and water (which is effected by the same agency), is the liberation of oxygen, which is restored to the atmosphere, by which means this element is maintained in a state of perpetual purity and freshness. By the decomposition of water, which takes place in the cells of the plant, hydrogen is retained, and forms one of the proximate elements of which resin, turpentine, and many aromatic products consist. The formation of those constituents which render plants valuable as producing food—as gluten, albumen, and casein—is owing principally to the presence of nitrogen and the phosphates of lime and magnesia. These enter the plant in a soluble state by absorption through the roots—the former in the shape of ammonia—and, with the alkaloids, undergo the various chemical changes into which they are afterwards formed, when exposed to the same potent power whose influence we are considering.

The exact way in which all the various products found in plants are elaborated from the four simple elements of which they are composed, is beyond the pale of scientific research; we only know the great agent is *Light*, acting in connection with *heat* and the vital powers of the plant.

We have before noticed, that we consider that the leaves of plants are acted upon differently at certain stages of their growth. When young, and while they are being developed, their principal action appears to be the assimilation of carbon, which takes place very rapidly in bright weather. At a later period of their growth, the sap undergoes a change, which renders it more susceptible to chemical affinities, and it is then that we find the peculiar secretion common to each plant in greatest abundance.

These principles being understood, it matters little whether the object to be obtained by cultivation be the production of a plant in flower—one of those matchless specimens which the horticultural stimulus of modern days has called into existence—or, of fruit, such as we see exhibited at the metropolitan shows or find in our best managed gardens: the principal agent in producing so much that is excellent—either as specimen plants or fruits—is *Solar Light*.

J. S.

(To be continued.)

CARNATIONS AND PICOTEES RECENTLY INTRODUCED.

Mr. Ainsworth (Holland).—Scarlet Bizarre. An extra fine variety. Habit of flower first-rate; undoubtedly in this respect the best of its class. Petal very broad, smooth on the edges, gently cupped, and of good substance. Marking bold and distinct; white good, scarlet dull. This fault, and the want of a few more petals for the crown, removes this variety in my judgment from the first place in its class. As it is, I place it second. Its habit of grass is narrow and flowing, closely resembling *Captain Edwards*, from which we presume it was originated. Appears very constant.

Lord Goderich (Gill).—Crimson Bizarre. A very sweet variety. Not very large, but very refined, and admirably marked. The colours are very rich, though the bizarre is not so dark as in *Lord Milton* and others in the class. It is also very distinct, and taken altogether I think it a most desirable variety. Being rather late in blooming, it should have the advantage of a frame or the warmest situation in the garden, to bring it forward for the general bloom.—Habit of grass dwarf.

Young Milton (Hopwood).—Crimson Bizarre. This flower has every good property except the white, which with me was very inferior. Evidently, it should not be overgrown.

Alice (Dodwell).—Pink Bizarre. A sport from a purple flake, raised from *Rachel*. A large and full flower, very showy on the home stage. For exhibition, the front bud should be removed just before it opens, leaving two, or, if the plant be very strong, three side-buds.

Fanny (Dodwell).—Pink Bizarre. Another seedling from the same parent, but of very different habit, being of medium size only. It has a very fine petal, well marked with rich light colours.

Admiral Napier (Holland).—Purple Flake. A good useful flower on the home stage, full and well formed, with a finely shaped petal. The white is inferior, and this, in my opinion, will keep it from taking a leading place in its class. A good grower.

Comet (Kaye).—Scarlet Flake. Not new, but as yet comparatively unknown in the Midlands and South. A well-formed flower, with a rich bright scarlet, and a good white. The colour is distributed in narrow stripes, which is a defect.

Christopher Sly (May).—Scarlet Flake. A truly splendid variety. Petal broad, nobly marked with a dense scarlet of a peculiar crimson shade; white good; flower full, well formed, and of large size. A vigorous grower.

Exit (May).—Scarlet Flake. As bloomed by me, certainly second to *Christopher Sly*. It has a remarkably finely formed petal, well marked with a rich scarlet; white good. A shy grower, apparently, and of weak habit. Should not be over-potted.

Ivanhoe (Chadwick).—Scarlet Flake. Another flower not yet generally known, but which, when more distributed, will, I think, be much esteemed. It is finely formed, with a broad petal well marked with dense scarlet. White good.

Magnet (Kaye).—Scarlet Flake. This variety is said to be too small. As

shown at Manchester by Mr. Kaye, it was certainly large enough, and I thought a very superior flower. Its habit of petal closely resembles that of *Admiral Curzon*, and it was splendidly marked with rich distinct scarlet.

Victoria Regina (Headly).—Scarlet Flake. A large and splendid flower. Finely formed petal, bold markings of very bright scarlet, but unfortunately so late in bloom that it will rarely be of use to the exhibitor north of the Trent.

Wilfred (Dodwell).—Scarlet Flake. A seedling from *Admiral Curzon*. A thin flower, of medium size, but of extra fine quality; white very pure; scarlet rich and well distributed; petal gently cupped and very smooth. A good grower.

King John (May).—Rose Flake. Evidently a seedling from *Flora's Garland*, and as grown in the south superior to that fine old variety. Very large, full, and finely marked with a rich rose; white good. Unfortunately, it is late in blooming, and from this cause I fear it will not be a useful flower for the Midlands and North.

Uncle Tom (Bramma).—Rose Flake. A fine variety. Has been, and deservedly, much admired. White good; petal finely formed, smooth, and of good substance, and well marked with a rich salmon-rose. Apt to spindle in autumn and early spring, and should not be overgrown.

PICOTEES.

Mrs. Headly (Headly).—Medium-edged Red. An improved *Esther* (Bayley), being without the spots on the under side of the petal, which disfigured that variety. It is a fine noble flower when well bloomed, but being so full, requires care to prevent the bursting of its pod. It was raised from *King James*, and, like that variety, appears to be a shy rooter.

Mrs. Hoyle (Hoyle).—Also a seedling from *King James*, but in a very different style to the preceding, being a broad heavy edge. It has a good petal, fine white, and solid colour, but is unfortunately late in blooming. Like *Mrs. Headly*, with me it appears very shy to root.

Mrs. Kelke (Turner).—Light edge, sometimes medium edged. A fine, noble flower, undoubtedly. Large and full, without confusion, with a fine broad petal and solid marginal colour, fairly free from bars. But, like many of the reds, it suffers in the white when compared with the best of the purple class. A fine grower, and does not need driving.

Mrs. Dodwell (Turner).—Heavy-edged Red. This flower has one of the best petals I have ever seen, with a very rich, distinct, marginal colour, and fine white. It is rather thin, but it speaks highly for the variety, that both blooms from the single plant grown by me could be successfully shown. It is evidently a seedling from *King James*, but with an improved habit of growth, judging from the results of one season.

Prince Albert (Headly).—A broad heavy edge. Colour very dark and rich; fine petal, and good general form. In some localities it has been condemned as possessing too much colour, whilst in others it has been thought to be amongst the best of its class.

Rosetta (Turner).—Light-edged Red. A most beautiful variety, possessing, with an admirable outline, great depth of flower, or, to be more explicit, a high crown. The marginal colour is bright and solid, and the white quite free from bars. As seen, I thought the petal rather too much cupped, nevertheless it is a great acquisition to this limited class. A fine grower.

Annot Lyle (Dodwell).—Medium or light-edged purple; outline and form of petal very fine, with great substance and extra fine white. Being a thin flower it requires hard disbudding, and like all seedlings of the *Princess Alice* breed, it is peculiarly subject to the attacks of green fly and thrip. If these pests are allowed to get ahead, they will inevitably produce such debility that semi-double flowers only will be produced.

Amy Robsart (Dodwell).—Light-edged Purple. This flower, a seedling from the *Duke of Rutland* crossed with pollen from *Alfred*, has apparently a fine constitution, and is a far better grower than any others of the same batch. It has the splendid petal of *Duke of Rutland*, with the rich white and form of *Alfred*. During the past season it has decidedly beaten *Haidee*, a feat which,

speaking for myself, I must say I never expected to see performed. It will carry three blooms on each plant, and should not be excessively stimulated.

Captain Dalgetty (Dodwell).—Another seedling from the same cross; a narrow-edged heavy. A fine-formed flower, being well crowned. The flower should be well matured before it is shown, that being its best character. A good grower.

Finis (May).—So named, as indicating the close of this celebrated raiser's career, and is most certainly a noble finish. The petal and substance are all that can be desired, while the extreme purity and brilliancy of its white contrasts most admirably with its solid and regular edging of rich purple. A fine grower, and rather early in bloom. Any one who has *Amy Robsart*, *Haidee*, and *Finis*, possesses not only the three best light-edged purple Picotees, but three of the best Picotees in cultivation.

Mrs. Bayley (Dodwell).—Heavy-edged Purple. Petal fine in form, with an exquisite white, great substance, and regular marginal colour of medium width; this flower is undoubtedly the best of the narrow-edged heavies whenever properly bloomed. But, as said in the case of *Annot Lyle*, it requires skill and care to develop it in perfection, being peculiarly susceptible of the attacks of insects, whilst, like all the varieties with very succulent grass, it is evidently the favourite food of these pests. It is also a bad winter doer. It will be found to do best from pipings, and as during summer it grows like a weed, it may easily be propagated by that mode.

Mrs. Keynes (Norman).—Light-edged Purple. Apparently a seedling from *Beauty* (Norman), which it closely resembles in its habit of growth and bloom. It is a small flower, and should not be allowed to carry above one bloom, but has a very fine petal, with a distinct solid margin, and fine substance. The white is rich, but not so pure as in *Finis*, *Haidee*, and *Amy Robsart*.

Mrs. May (Turner).—Heavy-edged Purple. Extra fine in form. The petal is broad, of good shape, and the marginal colour very distinct and regular. The white is wanting in the lustrous richness which belongs to one or two flowers in its class, but nevertheless it is a fine flower. Not a strong grower.

Alice (Hoyle).—Heavy-edged Rose. Quite a gem. Unfortunately, like most gems, it is small, which is its only drawback. It is admirably formed, beautifully pure in the white, with a dense, even, and well-proportioned marginal colour of the richest orange rose. It was shown at Oxford with the richest colour and nearest approach to scarlet I have as yet seen in the Picotee. If grown with one bloom on the plant only, it is probable size sufficient to enable it to occupy the front tier in a stand may be obtained, and it will evidently enjoy good generous growth. Undoubtedly originated from *King James*, and another illustration of the value of that celebrated "break" to the seedling raiser.

Countess of Errol (Turner).—Light-edged Rose. A large flower with fine broad petal, but as seen during the past season the marginal colour was too pale. The absence of sun-light and warmth during the period of bloom undoubtedly seriously aggravated this fault. A very vigorous grower.

Florence Nightingale (Dodwell).—Light-edged Rose. Like the variety described above, the marginal colour is sometimes too faint, but in proper character it is a sweet flower, well formed, and of extra fine quality. Raised from the same cross as *Amy Robsart*, it is of rather delicate habit, and will be found to do best grown singly in eight-inch pots.

Lady Grenville (Turner).—Heavy-edged Rose, of the soft, sweet colour peculiar to *Mrs. Barnard*. A very distinct and delightful variety, being well formed, smooth, very pure in the white, and regularly margined with a band of colour of the shade described. The habit of the petal is not good, being, in floristic phrase, sadd'ed, and therefore calling for much attention when expanding, to correct this peculiarity. It is rather small and delicate in habit, and should neither be over-potted nor excessively stimulated.

Lizzie (Dodwell.)—Medium-edged Rose, very similar in colour to the preceding. Has a fine petal and white, with a vigorous habit of growth, but, like others already described, requires to be carefully shielded from the ravages of the insect tribe, if it is to be seen in good character.

Miss Sainsbury (——).—Light-edged Rose. A good useful flower, much in the way of *Mrs. Barnard*, but not so smooth on the edge of the petals. The marginal colour is also different; a fiery salmon. Grows well.

Derby. E. S. DODWELL.

NOTES ON THE MONTH.

THE dry weather during the early part of the month, and indeed of the two previous months, has brought the land into a first-rate condition for all spring crops, even stiff retentive clays giving indication of falling to pieces under the influence of the dry winds which prevailed up to the third week; while all ordinary soils which have been exposed by rough digging or ploughing, are, as a farmer told me the other day, as dry as ashes. This, to the gardener and farmer, is the primary element of success for the coming crops; as getting seed well in is the crop half saved, as the old adage informs us. Swedes and Turnips have stood well—as have Winter Greens and Broccolies—as a glance at our own and neighbouring gardens testify. And as Potatoes are abundant, good, and cheap, and the labouring population in full work and earning good wages, there is a spirit of contentment and good feeling among them very different from what we have met with in former years, and, as it is so, we are very happy indeed to record the fact.

The season has not been so propitious to the forcing gardener. For several weeks past we have experienced easterly winds—as usual, cold, black, and dreary—with little sun. This has compelled them to make fires do the work of sunshine; a very sorry and expensive substitute—one that neither satisfies the gardener nor his employer. Inferior produce is no satisfaction to our brethren, no more than large bills are to his employer, and we therefore always sympathise—feelingly, perhaps—when such adverse incidents arise in the cultivation of fruits—I will say plants too—for plant-growing, and especially plant-forcing, is influenced largely by the cost of production. The frost which commenced on the evening of the 10th, and increased in severity on the 11th and 12th, caught some of us napping, no doubt—myself in some degree, as well as others. Those who have not taken precautions to protect their Apricot blossoms would suffer, as the trees were in full bloom, and 10° of frost—dry though it was—is not easily kept from coming in contact with the moist stigma of the Apricot bloom, which, clever men tell us, is the cause of mischief, in which we are strongly disposed to coincide. Peaches would escape, as they were not in flower; but young vegetables just transferred from the frames and shelters where they have been kept through the winter, look miserable, even when partially protected by branches, &c., stuck around them. We, in our day, are unfortunate, to what we remember the gardeners of twenty years back were, when we could keep this kind of stuff in frames long enough to harden them completely before turning out; but now-a-days room is wanted for *bedding-stuff*, and of course, as the beds on the parterres *must* be filled, out *must* go, the first days of March, the Cauliflowers, Lettuce, Peas, and a host of things *brought forward for early supply*

without much chance of preparing them, and then comes a frost, like that we had on the 12th, and farewell all the gardener's hopes of early Peas, Cauliflowers, &c. Surely gardeners ought to be wise in their generation, to fight against so many contrarieties. Want of *sunshine* we complained of above. Up to the day we write, this deficiency of the gardener's friend continues. We have had rain, very acceptable to vegetables and other things, but sunshine we have had but little. This is unfortunate for Strawberry-forcing, as they are not much without an abundance of light. The wind has veered from the West to the East again, and dark foggy weather with it. What a month for newly planted trees! Those whom circumstances compelled, or who were misled by the appearances in February, to plant (and much we know was done) evergreens, will grieve over disappointed hopes, and may perhaps learn wisdom from experience. During the end of February, and up to the full middle of March, the easterly wind has been as dry as a "Sirocco" of the desert, and has taken away every particle of moisture from the leaves of plants exposed to its withering influence. Some of those which had roots (unhurt and growing) to supply the daily waste by evaporation, have had hard work to go through the ordeal. But what can we say about those planted previously? We can only sympathise with the planters who were then compelled to plant, perhaps against their conviction; to those who planted from choice we forbear saying much, as we hope it will be the last time they will act "so indiscreetly," as the polite phrase has it. Should rain and dull weather follow, *now* will be the time for planting evergreens. Let them, however, recover themselves a little before moving; and if not compelled—and time is no object—if you allow them to stand over till September next, take my word for it, you will succeed all the better.

March 22. G. F.

HORTICULTURAL SOCIETY.

At a meeting of this Society, held February 26, a few interesting plants were brought together. Messrs. Rollisson contributed some Orchids, among which were one or two remarkable Vandas, of which we hope soon to give coloured illustrations. They also sent an example of the double white-flowered Chinese Plum, which "well done," is a very ornamental plant. Messrs. Veitch had a brilliant-coloured Correa, which was stated to have been raised from Australian seeds. They also sent some well-grown Epacrises. Eucharis grandiflora was contributed by Messrs. E. G. Henderson. It has large and striking snow-white flowers, which very much resemble those of a Pancratium, to which the plant is evidently nearly related. From the Society's Garden was Thyrsacanthus rutilans, whose pendent bunches of gay scarlet tubular blossoms at once point it out as one of our most showy winter-flowering stove plants. In the same collection were also Reseda grandiflora, a robust new kind of Mignonette, and a Crimean Snowdrop, gathered, it was said, on the heights of Sebastopol by Colonel Munro.

Some observations on grafting were made on this occasion by the Vice-Secretary. He began (says the *Gardeners' Chronicle*) by stating that grafting often occurs naturally, as is instanced by branches, fruits, and even petals of flowers in close contact, and under certain conditions growing together, and went on to show that such accidents had doubtless led to effecting the same thing artificially. It is in reality, he said, the property of all living vegetable tissues to form permanent adhesions under certain circumstances. *Very young* or nascent tissue may be made to grow together with facility, as is exemplified in practice by what is called herbaceous grafting. Ripe tissues were next alluded to; but even in the case of these it was shown that a union could only be effected by bringing into contact nascent matter, which practically consists in fitting the line of the cambium in the stock neatly to that of the scion, or in other words fitting the two together exactly. If this manipulation was not effected skilfully, the union, it was stated, would be imperfect, as would also be the case if the stock was broader than the scion. It was mentioned that some believe that the scion sends down wood into the stock, but that this theory was attended by many difficulties. The point had been illustrated by Dr. Maclean, of Colchester, who grafted a yellow Beet on a red one; when the two were split down the middle after they had been united, it was found that the yellow Beet still remained yellow, and that the red kind on which it was grafted still remained red. In this case there was no blending together of the tissues; the two varieties kept quite distinct. Cellular tissue, it was stated, would not unite with wood, nor wood with wood; with unskilful operators and the employment of unsuitable stocks, bad joints were therefore of frequent occurrence. Although the scion was not of the same nature as the stock, there might be adhesion; but the line of separation between the two would always remain distinct, and in bad cases it not unfrequently happened that the two parted company across the line of union. Nevertheless, when stock and scion were alike in kind and constitution, as when a Pear is grafted on a Pear, and the workmanship well performed, all traces of their having been grafted disappeared. It was stated that under proper conditions adhesions might therefore be permanent and perfect, and that grafting might result in as complete a plant as any seedling. Of this various proofs were produced. It was shown, however, that adhesions might be temporary either from bad workmanship or from want of consanguinity. The ancients, it was stated, were of opinion that Apples would grow on Plane-trees, and Beechmast on Chestnuts; but it was explained that this was a mistake, and that no permanent union could take place unless stock and scion had the same constitution. Sometimes durable unions might be effected, as was instanced in the case of Pears on Quinces and Peaches on Plums; but they were not permanent. Evergreen trees, it was stated, did not succeed on deciduous ones, in illustration of which an example of Quercus Turneri worked on the common Oak was produced; the evergreen in this case had grown 13 or 14 years, but was now dead, while the stock was alive and throwing out suckers. Similar cases, with nearly as bad results, were also laid before the meeting. But what, it

was asked, is "the same constitution?" Peaches take on Plums, although constitutionally unlike; but what is very curious, French Peaches, which take freely on the Pear Plum, dislike the Muscle Plum, and other examples of the same kind were brought forward. It was stated to be far easier to say what was not the same in constitution. The Cedar of Lebanon, for instance, would not long agree with a Larch, nor the Medlar with the Whitethorn, or the purple Cytisus with the Laburnum. In general the following conclusions might be drawn:—1. A scion will always form a perfect and permanent union with its stock if both are from the same individual. 2. A scion will generally form a perfect and permanent union with its stock if one is a mere variety of the other. 3. A durable, but not permanent union may be effected when one species of a genus is worked on another species. 4. No union either durable or permanent can be expected when stock and scion are widely different. 5. Bad workmanship will render any kind of grafting perishable. Grafted plants, then, are not necessarily worse than seedlings? A letter from a Fellow of the Society was read to show that in the case of Rhododendrons at least they were. Examples in the shape of grafted Rhododendrons, apparently proving the contrary, were, however, produced by Messrs. Standish and Noble. It was, nevertheless, universally admitted that except the stock and scion were identical in their natures plants thus increased were not so good as seedlings. Both reason and experience therefore showed that everything depended on the consanguinity of the stock and scion, and that what is wanted is not to have new methods of grafting invented, but to know more about consanguinity.

Mr. Glendinning objected to the statement that evergreen Oaks did not live long on deciduous ones, and pointed to the fact that in Devonshire the Lucombe Oak worked on Quercus Cerris had attained the size and age of timber trees.

The room was plentifully supplied with specimens of grafted plants from Messrs. Standish and Noble of Bagshot, Veitch and Son of Chelsea and Exeter, Masters of Canterbury, Osborn of Fulham, Rivers of Sawbridgeworth, and from the garden of the Society.

Another ordinary meeting of this Society was held on the 18th ult. On this occasion Mr. Anderson, of Edinburgh, received a certificate of merit for a singular hybrid Rhododendron, a cross between the hardy R. dauricum and the tender R. formosum. Its flowers were of a pale peach colour and larger than those of dauricum, while it was reported to be quite as hardy as the last-named kind. It may, therefore, prove a good addition to our flower-borders. Messrs. Lee showed Imatophyllum miniatum, a Clivia-like plant, with long dark-green Leek-like leaves, from among which shot a short stout erect stem, surmounted by a noble head of salmon-coloured blossoms. The same nurserymen also sent several nice Camellias; among which were Jubilee, a carnation-striped kind, a rosy-pink sort called Normani, a bud of a very pretty white variety, and Archduchess Augusta. Of these the last was, perhaps, the most remarkable, inasmuch as it is new in colour, being violet-purple with a stripe of white down the centre of each petal. From Messrs. Veitch came a little tree, beautifully in bloom, of the

double red Chinese Almond, a truly pretty plant, and one to which we would direct the attention of all who are anxious about keeping their greenhouses or conservatories gay at this season of the year. The freedom with which it flowers renders it particularly striking. Among plants from Messrs. Henderson, Pine-apple Place, was Pteris aspericaulis, a tender Fern, figured in our March number. Mr. Butcher sent some well preserved Grapes of the Barbarossa kind, which received honourable mention. Among plants from the Society's garden was the golden-flowered Lachenalia, a rather pretty bulbous plant, imported a year or two ago from the Cape of Good Hope, by Mr. Wicks.

At this meeting the Vice-Secretary gave a short lecture on our two kinds of British Oak, viz., the Durmast, or Quercus sessiliflora, and the common sort, or Q. pedunculata. Of these the Durmast was shown to be the most valuable; for, in addition to its timber being at least equal, if not superior to that of the common Oak, evidence was adduced to show that it grew faster and formed a much handsomer tree. Planters, therefore, would do well to bear this in mind, and in future should take care to select the Durmast, of which examples are to be found in the New Forest and other parts of England, in preference to the common Oak.

THE BALSAM.

THIS is one of the most beautiful of plants, and certainly one of the easiest to cultivate. Many good articles have been written respecting the best mode of growing it, but still in this particular there is, apparently, room for improvement, and some of your readers may possibly like to be put in possession of the practice by which plants such as those exhibited by me at the National Floricultural Society's meeting, in July last, may be produced. The following, then, is my mode of proceeding.

In sowing the seed, I prefer the method of putting one seed in a thumb or small 60-sized pot, especially if the object is to exhibit at shows. This should be done about the middle of March, for flowering in June or July. Place them on a gentle hotbed or hot-water tank, as near the glass as possible. The lights should incline towards the south, in order that the plants may catch every ray of light. The precaution of letting all superfluous moisture escape at the highest point of the frame must be adopted, by opening it about a quarter to half an inch on bright sunny days, if the wind be not too cold or strong; a little air may be given as soon as the plants begin to form their first leaves; when the latter are well developed, the plants should be shifted into larger pots; if plenty of convenience exists as to warm greenhouses or intermediate houses, with a tan or hot-water pit within them, and it is desired to grow the plants to a large size, they may be shifted into 32's (six-inch pots) at once, and plunged halfway in bottom heat of from 50° to 55°, as near as possible; the roots will soon appear at the sides of the pot, and before they turn halfway round the ball they should be again shifted, for the last time, into 16's, 12's, or 8-sized pots, according to the size that may be desired.

In the above instructions size of plant has been kept in view, but those who have not the above-named conveniences should be content to sow a fortnight later, still following the same plan as regards the primary treatment. In this case, the first shift ought to be into 48's (four-inch pots), and if the help of a hotbed can be obtained, the plants may be plunged therein, using due precaution to ascertain that the heat is not too great at this stage. Another plan presents itself, and one we generally adopt:—It is, to plant them in a pit heated by hot water pipes from about 60° to 65° of temperature by night, allowing an increase on bright days of ten additional degrees. The plants should again be shifted into 32's or 24-sized pots, as before, for the last time.

These matters as to raising and shifting being settled, let us proceed to show that, as the Balsam is a native of climes where light and heat are more constant than in England, every attention must be paid to protect the plant from sudden chills, either from cold air or failure of bottom heat; for, if once they become stunted by cold, farewell to symmetry or size of plant, or equality of flowering; yet these plants are very fond of free atmospheric circulation, with all the light it is possible to give them. Care must be taken to give them plenty of room; to do them full justice, they should stand as far apart as they are high.

Having now stated the method of raising, potting, and general management, there yet remains to be explained the nature of the compost to be used. This should be the top spit, about four inches thick, from a meadow of rich, soft, light loam, a year old; if this is not to be had, take fresh soil of the same quality, and, after paring off the turf from the loam, char the former, so as to reduce it to a state fit for breaking up and mixing with the loam; add to this an equal quantity of manure from a spent hotbed, if it be turned over to sweeten and dry before mixing, all the better. This compost should then be thrown together and well chopped and turned (not sifted), so that the incorporation may be complete. In potting, always endeavour to sink the plants low enough for the soil to reach the cotyledons; if that cannot be done in the first, it can be accomplished in the second shift, and it is necessary, in order to obtain firmness in the pot, and also fresh surface of stem from whence to obtain more root. The pots should be drained increasingly as the plants are shifted, and over the drainage should be placed about one or two inches of fresh manure from the stable; this will be found very useful to the plants as they increase in size.

As regards manure water, the larger the plants are required to be, so, in proportion, should it be used; but its application must be left to the discretion of the grower, for words fail to convey how often, how strong, how early, &c., it ought to be given: its use may heighten the colours, but it is very dangerous in unskilful hands; the employment of it is likely to diminish the size and doubleness of the blossoms, by forcing the plants too much; it also produces, sometimes, rot in the stem, often blighting our hopes when expectation of success is at the highest. In general, the compost we have recommended and pure water answer every purpose.

Let me remark, in conclusion, that my plants are grown in 32-sized

pots, which seem to afford all the requisites (of *plant* and *flower*) that can be desired.

The above results may also be obtained by sowing in the first, or even so late as the third week in April, on a slight or nearly spent hot-bed, transferring the plants at once to the last-named pots, and placing them in a cold pit in the middle or end of May. These will bloom in August and September, and will well repay the little trouble bestowed upon them, by a splendid display of many-coloured blossoms.

S. T. F.

DESCRIPTIVE LIST OF HARDY CONIFERS.—No. XX.

Pinus Hartwegi—Hartweg's Pine.

This species is a native of Mexico, where Hartweg discovered it on Mount Campanario, growing at an elevation of 9000 feet, and ranging immediately above Picea religiosa. It forms a tree of moderate size, with leaves six inches and upwards in length, of a pale green, and covered with a glaucous bloom. Although this Pine belongs to the

Pinus Hartwegi.

five-leaved section of Pinus, it is often found with four only in a bundle. The cones are 4—5 inches long, and pendulous. Many of

the species in the group to which Hartweg's Pine belongs are remarkable for the length of their leaves; and this, added to these, there being five in a sheath, gives them a peculiar and striking appearance, and as such they are much prized by collectors. Unfortunately the winter of 1853-4 and the following one proved fatal to many of the handsomest kinds, and they may be pronounced too tender for our climate. Of this section we lost from our collection leiophylla, Wincesteriana, Gordoniana, filifolia, Russelliana, Devoniana, Grenvilleæ, and even palustris (australis); while Hartwegi, Montezumæ, and apulcensis of the long-leaved species survived. And we find pretty nearly the same results happened in other Pinetums. This greatly enhances the value of those which have turned out to be hardy—among them Hartwegi—which is now the finest of the long-leaved species, capable of enduring our winters, excepting, perhaps, P. microphylla, which our readers will find engraved in our last year's volume.

No collection of Coniferæ can be called complete except it contains our present subject, which, even in a young state, has something grand and striking in its appearance. Although the soil should be naturally dry or well drained for growing it, it prefers a good rich loam, rather heavy than otherwise.

In composition this section should be grouped together, as they do not harmonise well with the short-leaved kinds. Planted in this way, and in appropriate situations, they will form a striking mass, very distinct from anything else.

Our engraving was taken from a fine specimen in the Pinetum at Nuneham Park, near Oxford, alluded to by us in our last number.

BEDDING PLANTS.

We now daily see increasing evidence around us that nature is already breaking from the chilling thraldom of cold winter. The Aconite, despite wind and frost, has long since put forth its blossom, to gladden the heart of man. Snowdrops, too, are already beautiful; and buds of all kinds are full of promise for the future. Nor are the indications of the coming season confined alone to the vegetable kingdom: animated nature, too, has long since given unmistakable signs of returning spring—the feathered race daily pour forth their cheerful melody. All this reminds the gardener, and all who delight in gardens, that a busy time is at hand, calling for more exertion and labour, but at the same time affording greater pleasure.

The pleasures we take in a garden are the most innocent delights of human life. Kings and nobles have in all ages busied themselves in garden pursuits. A garden was the habitation of our first parents before their fall. It is naturally apt to fill the mind with calmness and tranquillity, and to lay all its turbulent passions at rest. It gives us a great insight into the contrivance, goodness, and wisdom of Providence, and suggests innumerable subjects for meditation. The very complacency and satisfaction which a man takes in these works of nature is

a laudable, if not a virtuous habit of mind; and leads him to look from "Nature up to Nature's God."

Among the various demands on a gardener's time, those of the flower garden are not the least. Great is the change which of late years has taken place in flower gardening. Instead of the herbaceous plants, annuals, &c., which were its usual tenants in our boyish days, we have Pelargoniums, Calceolarias, Verbenas, Petunias, and a long catalogue of other things too numerous to name here. To provide annually a sufficient stock of this "bedding stuff," is oftentimes attended with no small degree of labour. And yet, if we fall short of anything at planting time, and are not able to fill every bed with the colours we intended, the effect will be anything but pleasing—even one bad bed spoils the whole effect. Some persons advocate bedding out about the beginning of June, and not before; they say, plants do not grow if bedded out before. They may not grow much at top if bedded earlier, but they will be making roots, and when they begin to grow, they push stronger and more rapidly than late-planted. "Bedding out" should never, if possible, be deferred until June, because the days are then nearly at their greatest length, and if dry weather prevails, it causes a great deal of watering, and half the summer is over before the beds have any effect. We always like to "bed out" as soon after the first week in May as the weather permits. Last May was unusually cold up to the 20th, but after that the weather was most beautiful for planting out. I have seen in this county (Yorkshire), scarlet Pelargoniums planted out as early as the 24th of April, and I have myself planted them out several times as early as the first week in May.

I would not lose a day after the 10th of May, if the weather was favourable, for though the plants do not grow much at head, they will require little or no watering; and if the soil is in proper condition—as it ought to be—they will make roots fast, so that, when warm weather comes, they push away strongly and rapidly. I also like to plant the beds pretty full at first, for it is very easy to cut and thin away as they grow, and much better than not having the beds half filled nearly the greater part of summer. The great point is to have plenty of plants. There ought always to be a good stock struck in the autumn, and either potted off, or wintered in cutting-pans or boxes. Most gardeners winter their "bedding stuff" in Vineries, Peach-houses, pits, &c.; but, when these are wanted in spring, the difficulty is then —when the plants require potting off, and consequently more space— to find a place for them until planting time. There are a great many things which, if properly managed, may be put out of doors the beginning of April, protecting them a little at night and during frosts. A dry, sheltered situation should be selected—if a hard road, so much the better; but if it be a border, cover it with boards, slates, or tiles, and on these place a compost of rotten leaves, sand, and a little loam, from four to six inches in depth; turn the plants out of their pots and plant in the compost; when planted, stretch some rods over them, so that they may be covered at nights and during frosts with mats or boughs. They will not require any watering, so that there is no more labour attending them than if kept in houses or pits, when they would

daily require watering, and occasionally fumigating. By the middle of May they will have made a large quantity of roots, and will move well and do much better than if cramped up in pots. Pelargoniums, Verbenas, Petunias, &c., may be planted out in this manner. By getting as many things as possible put out in this way, it gives persons an opportunity to bring forward more delicate plants, and anything that one may be rather short of. There are nearly in all places some sheltered warm spots that may be made available for this purpose, and by a little contrivance a great quantity of "bedding stuff" may be had in first-rate order, for planting out any time after the middle of May. It is better to take a little extra trouble now, so as to have sufficient plants, than, when bedding-out time comes, to find oneself short of this thing and of that.

M. SAUL.

ON ESPALIER TRAINING GOOSEBERRIES AND CURRANTS.

BY training these fruits espalier fashion, they present a neater appearance in gardens, and are well adapted for accompanying walks or dividing plots of ground. The fruit is likewise more easily gathered, and can be more effectually covered with netting when birds are troublesome. The plan practised at Bowood, after the ground has been duly prepared, is to plant the trees in lines four to five feet apart (if intended for a plantation), and the plants four feet apart in the rows. After planting, the back and front shoots will require cutting away, reserving those which range with the line of trees, for training; the first season it will only be necessary to place a few stakes crosswise against each tree (in the same manner as young fruit trees in the nurseries are trained), and tie in the wood to these in a fan-shaped manner. The second winter a regular espalier must be formed by placing upright stakes, 3 feet apart, in the direction of the rows of trees. The part of these inserted in the ground should be *charred*, by which they will last for several years; to these, *rails* or horizontal rods should be tied with osier twigs; the lowermost one should be one foot from the ground, and the next nine or ten inches higher. The espaliers here are about four feet high, which is sufficient for all the kinds except the Upright Red, or Ironmonger, which is a strong grower, and takes a five feet espalier. The rails may be of any kind—Hazel or Ash—the slenderer the better, as then the uprights need not be so strong. The trees will fill a trellis four feet high in three years, after which they give very little trouble, excepting cutting back the young wood not wanted for filling up, which is done after the fruit is gathered, and occasionally replacing a rotten stake. The cultivation in other respects is similar to the old plan; on dry soils a mulching of half rotten manure spread between the rows in May will keep the ground cool, and greatly benefit the crop. We find by this plan enormous crops are produced on a small space of ground, and although rather more trouble, the many advantages espalier training has over the old

bush plan will repay the cultivator. It would be more expense in the first place, but iron uprights with three-eighths wire for the horizontal bars, similar to the cheap wire fences, would make a very neat trellis for these fruits where wood is scarce, and would in time repay the outlay. S.

Boxwood, March 1856.

STUDY OF NATURAL HISTORY.

DURING my rambles in quest of Ferns and various wild flowers which grow luxuriantly in the neighbourhood of Bath, I have been grieved to find the country people not only ignorant, but indifferent, about the objects around them: birds, insects, and flowers are unheeded, and it is in vain to ask for any particulars beyond the mere names, and even that knowledge is so scanty that I can seldom find a villager who can tell me when the swallows arrive or the song of the nightingale is heard. A clever writer has powerfully written in the *Athenæum*, and in other metropolitan publications I have recently noticed letters on this subject. Portions of those letters are so suitable to the pages of the *Florist*, that I will enclose copies of them.

For twenty years I have been endeavouring to inculcate a love for nature amongst the young people of my acquaintance, and I am happy in believing that my efforts have been successful amongst the educated; but I feel a much deeper interest for the poor, and would fain provide them with sources of enjoyment that would soften their hard lot, and give them pursuits tending towards moral improvement and unbought pleasure.

During the last month, I have placed in my parlour window several glass jars in which plants and animals are displayed, in the way that you may have seen them, on a grander scale, in the Royal Zoological Gardens. Diving water spiders (*Argyroneta aquatica*), prove very attractive. "These spiders," says De Geer, "spin in the water a cell of strong, closely woven, white silk, in the form of half the shell of a pigeon's egg, or like the diving-bell. This is sometimes left partly above water, but at others it is entirely submersed, and is always attached to the objects near it by a great number of irregular threads. It is closed all round, but has a large opening below." Into this opening the spiders convey air-bubbles and there burst them, so that their habitation is gradually expanded with atmospheric air, until they have a large dry room, surrounded by water, to deposit their eggs in and bring up their progeny. There is a crowd daily round my parlour window to watch the operations of those balloon spiders. I hear the conversation of my juvenile visitors, and, when I find occasion to do so, give open-air lectures to the auditors. I have, besides spiders, fishes, beetles, and marine animals, all healthy, and kept with very little trouble. The only thing needful is to establish a balance of animal and vegetable life. If the Valisneria spiralis becomes brown, I put in a water-snail, which soon removes the Confervæ; if the water becomes

cloudy, I add plants or animals, as experience directs, and without ever changing the water it remains pure and bright.

If gardeners would give themselves the trouble to attend to a few of the marvellous objects around them, they would augment the pleasures of their occupations and obtain valuable knowledge, and thus might be established a bond between youth and age; for, if once a child is roused to the pursuit of natural history, he will become a pleasant companion to grown-up people—he will become merciful, for it is impossible to love God's creatures and be cruel to them, and it is impossible to know the wonderful works of our Almighty Creator and not to love them.

Schoolmasters should, by command, instruct their scholars in the outlines of natural history. Nothing is more easy—nothing tends more to give purpose to pleasure, or to fill up spare moments more profitably.

I would not have lads made *collectors* but *observers*. Instruct them to venerate life, and to destroy it only as an act of necessity—never in wantonness—never needlessly, not even the life of a plant.

C. E.

Bath.

CALENDAR FOR THE MONTH.

Auriculas.—As many of these will now be in bloom, the frame should be removed to a north aspect, to prolong the beauty of the delicate tints of colour these possess. Late blooming kinds, however, should for a time remain in their old quarters. A rather free supply of water will now be required, with plenty of air.

Azaleas.—Attend carefully to the watering of all the young growing plants that have been potted; syringe occasionally, and give air freely in fine weather. Shift such large plants as are not showing bloom, if they require a larger size pot. The bloom buds of those that are going to flower will now be coming forward; water freely, and give plenty of air on fine days. To prolong the period of flowering, some of the later kinds should be placed either in a house or pit with a north aspect.

Camellias.—These should be kept pretty warm while they are making their young shoots; they should have but little air, and should be syringed freely.

Carnations and Picotees.—The season and the weather are in favour of speedily finishing the potting of these plants for blooming. Those for blooming in beds or borders may now be planted out, without risk. Avoid planting them in soil infested with wireworm.

Cinerarias.—Many now will be in full bloom, others will be opening. In either state they are a most pleasing flower at this season of the year, well grown plants being in every respect very interesting. The improvement made in the Cineraria within the last few years has been very great, both in form and variety. Flowers, such as Lady Hume Campbell, thought perfect a few years since, would not now be tolerated.

Cold Frames.—Remove the lights off daily, if the state of the weather permits, so as gradually to harden off before planting out; water freely, and, as soon as you perceive any green-fly, fumigate.

Conservatory and Show-house.—As there can be no want of flowering plants for decorating at this season, be scrupulously attentive with regard to cleanliness; dead leaves and dead flowers, if not removed, will mar the effect of the finest display of flowers. Cinerarias will now be gay; also some of the Azaleas that have been forwarded with a little heat. Tropæolums, when well done, are good objects for the conservatory; Roses ought now to be very fine. Genistas, Epacrises, Chorozemas, Pultenæas, Hoveas, Acacias, Boronias, Leschenaultias, &c., will now add to the display and give greater variety. Give plenty of air and water freely.

Cucumbers.—Attend to the directions given in previous Calendars.

Dahlias.—Repot all that are struck, and grow them on in a gentle bottom heat until well established. When established, repot into a size larger pot, and place them in a cold pit, free from slugs or snails. Cover the pits or frames up during frosty nights. Sow seed in shallow pans, placing them in a hotbed having a brisk heat. When a sufficient number of cuttings has been obtained, divide the roots; they will make several strong plants each, which are best adapted for planting in the most exposed situations.

Flower Garden.—No time should be lost in getting the beds in readiness for the summer plants. The soil should be frequently turned over; do not on any account make it over-rich, as this will give more foliage than flowers. Look often over the stock of plants for the beds, and endeavour to have sufficient to fill each and every bed with its proper colour. Harden off spring-struck cuttings; bring forward annuals. Roll the grass frequently before mowing, you will afterwards see the benefit of it. Prune Roses.

Forcing Hardy Shrubs.—Keep up a moist atmosphere; syringe freely, and give plenty of air. As you remove plants in flower, fill up with others. Attend to previous directions.

Forcing Ground.—Keep up a succession of French Beans. Bring forward Tomatoes and Capsicums, also Cucumbers for ridges. Prick out into boxes or frames, on a little heat, Sweet Marjoram and Basil; also Celery. Sow Mustard and Cress.

Fruit (Hardy).—Attend to the protection of Peach, Nectarines, and Apricot trees until towards the end of the month, when, if the weather be mild and fair, they may be dispensed with. Uncover Fig-trees. Apricots will be set now, and should often be gone over, thinning a few at a time. Finish grafting.

Greenhouse; Hard-wooded Plants.—Pay the greatest attention to the watering of all newly-potted plants, but more particularly slow-growing plants. Give air freely on fine days, but shut up early; syringe occasionally. Keep everything clean and tidy, and look out for insects. *Soft-wooded.*—Stop, and pinch off the end of the shoots of Cupheas, Heliotropes, Salvias, &c., if large specimens are required. Shift the strongest plants into larger pots.

Hollyhocks.—Repot spring struck plants; they will make greater progress in pots if good rich soil is used than if planted out before the weather is settled. Strong plants may be planted out at once, giving each plant a few spits of rotten manure.

Kitchen-garden.—Plant the general crop of Potatoes; plant Cauliflowers, Lettuces, Savoys, Borecole, and Cabbages; plant herbs. Sow Peas and Broad Beans for succession; sow Broccoli of sorts for general crop; sow Cauliflowers for succession; sow Savoys, Borecole, Beet-root, and Carrots, for general crop. Sow Turnips, Spinach, and Parsley. Sow Celery for late crop; sow Radishes; sow herbs; sow Salsafy and Scorzonera; sow Asparagus; sow Lettuces. Destroy weeds as soon as they appear, and keep soil open among crops. Keep everything clean and tidy.

Melons.—Do not let the shoots get crowded; when the flowers are expanded, fertilise; give air pretty freely, unless the weather be cold. Plant out young plants as soon as the beds are ready—use a good loamy soil. Keep up a steady bottom heat and a moist growing atmosphere. Sow for successional crops.

Pansies.—Gather any premature flowers these may produce; this will cause larger and finer flowers in May, the time they will be required for exhibiting. Those in pots will require constant looking over with the watering pot. Use weak liquid manure two or three times a week.

Peach Forcing.—Attend to the disbudding and tying of the shoots; do not remove too many at a time, but go over the trees often. When any of the trees are deficient of wood, endeavour to get some young shoots to fill up. In thinning the fruit, be guided by the condition of the tree; on a strong, vigorous-growing tree, leave a good large crop, that will check over exuberance; on weak growing trees, leave rather a light crop, this will give them a chance to grow stronger. Keep a steady temperature of about 50° or 60° until after the stoning of the fruit; when this is completed, gradually raise the temperature. Water the borders freely when they require it.

Pelargoniums will now be in vigorous growth, the early bloomers throwing up their trusses. Attend to tying out the branches to neat osier stakes. Do not permit any to be crowded; a free circulation of air all round the plants is indispensable. If needful, wash the foliage thoroughly, using a syringe and soft water. About the end of the month fumigate thoroughly, whether you perceive green-fly or not; and this should be done in every house and frame on the premises. Do not allow the plants to want water long, and use clear, weak manure water once or twice a week.

Pinks.—These having been top-dressed will require but little attention for some time. Disbudding will be the next thing to be done, if large blooms are required.

Tulips.—April is the most trying month for Tulips, from the frequency of showers, followed by frosty nights. It will be better to give a good watering between the plants when they require it than to allow them to have rain, which remains so long in the heart of the plant. Avoid hail night or day, by covering up, if threatening showers appear. During very cold wind secure the canvas used for protecting them at night the exposed side of the bed; this will greatly protect them without drawing the plants.

2

Vanda s

1 *tricolor flavescens*
2 *tricolor formosa*.

Plate 113.

Printed by C. Chabee

[illegible] subjects [illegible]
[illegible] and Orchids. We [illegible]
[illegible] looked after [illegible]
[illegible] little doubt that [illegible]
[illegible] vied with the [illegible]
[illegible] Sons, of Tooting, [illegible]
[illegible] during the [illegible]
[illegible] from [illegible]
[illegible] of the pseudobulbs [illegible]
[illegible] as we had only [illegible]
[illegible] hope, however, our [illegible]
[illegible] of bloom consist [illegible]
[illegible] plants will properly [illegible]
[illegible] state they are [illegible]
[illegible] seemed as to render [illegible]
[illegible] alone.

The two beautiful [illegible] sent to Messrs. W[illegible], J. Heushell, during [illegible] Jas. Mr Heushell, in [illegible] with V. suavis, trichor, [illegible] Orchids in any other trees [illegible] trees of the northern [illegible] Tapost, and Chiswick, at [illegible] above the level of the sea, [illegible] 76° Fahr. The [illegible] mountains which run [illegible] operation. It is remarkable [illegible] Vandas, Dendrobiums, [illegible] plant requires good [illegible] the most open valve [illegible] is very good to [illegible] is rare to meet with.

Most of the Orchids are [illegible] not however, the case with the Vandas [illegible] circumstances they are [illegible] strong growth, [illegible] best of the East Indian Orchids, [illegible] only a temperature of from 70 to 85° [illegible] which for ordinary purposes [illegible] in May (by varying this season, [illegible] be had in bloom at the will of the cultivator); in [illegible] they will have made sufficient growth for cutting, [illegible] it should then be [illegible] to get it well matured, for unless attention is paid to this particular point,

VANDAS.

(PLATE 113.)

THE subjects of our present illustration belong to a genus of well-known Orchids. Vanda suavis, tricolor, teres, cærulea, &c., have long ranked amongst the most beautiful of that family, and there is little doubt that the two varieties now figured will be equally prized as they become known. It is to the Messrs. Rollisson and Sons, of Tooting, that we are indebted for the opportunity of figuring these two varieties of V. tricolor, which appear to be distinct from any we have hitherto possessed. Unfortunately the size of our page does not allow us to do justice to these noble plants, as we can only give a few flowers on each spike of bloom; we hope, however, our readers will remember that an ordinary "spike" of bloom consists of from 10 to 15 flowers, and that strong plants will frequently produce three and four such spikes; in that state they are truly grand objects. They are, moreover, so highly scented as to render them worthy of cultivation for that property alone.

The two beautiful varieties of this genus now under notice were sent to Messrs. W. Rollisson & Sons by their collector, Mr. J. Henshall, during his researches in the western parts of Java. Mr. Henshall, in his notes, states that the section to which V. suavis, tricolor, and insignis belong is seldom found growing on any other trees except the old and neglected Coffee trees of the northern valleys in the districts of Tugu, Blaboer, Tapost, and Chiseroa, at an elevation seldom below 2600 feet above the level of the sea, with a temperature ranging from 55° to 76° Fahr. These valleys are formed by the central range of mountains which run through Java and almost parallel with the equator. It is remarkable that the southern valleys produce but few Vandas, Dendrobiums, Cœlogynes, or Saccolabiums; while Phalænopsis grandiflora grows in profusion. On the other hand, the northern valleys produce almost every species of Orchid that is indigenous to Java, excepting Phalænopsis grandiflora, which is rare to meet with.

Many of the Orchids are thought difficult to cultivate; such is not, however, the case with the Vandas. Under favourable circumstances they are fast and strong-growing plants. The Vanda, like most of the East Indian Orchids, delights in a moist shady temperature of from 70° to 85° during its season of growth, which for ordinary purposes should commence in May (by varying this season, however, they may be had in bloom at the will of the cultivator); in four months they will have made sufficient growth for one season, the object should then be to get it well matured, for unless attention is paid to this particular point,

little bloom need be expected, and there will always be a greater risk of the plants suffering during the winter when their growth is not properly ripened. By means of more light and air, and less moisture, the temperature should be gradually lowered to 50° or 55°, which will be found sufficient during the winter. In February they may be induced to flower by giving them a somewhat higher temperature, say 65°; treated thus, the plants would most likely bloom in April.

Various composts have been recommended for the potting of Orchids; whatever it may be, it should be very porous, and capable of resisting decay for as long a period as possible; for during the growing season it will frequently be saturated with water; and if the compost used consists of materials which rot quickly the roots will soon be surrounded with decayed matter, which will retain the water and injure the health of the plant. This applies to other Orchids as well as our present subject. Sphagnum moss, charcoal, and potsherds are found to answer the purpose well.

THE PEACH.

(Continued from page 110).

As the ordinary routine of disbudding the trees of their surplus wood has been already detailed at page 72, I need not notice it further, as the same course will have to be followed until the trees cover their allotted space; before which time they will be in a full-bearing state, which will act as a check to over-luxuriance, and by managing this the trees may be kept at about the same size for a number of years. One fact in reference to disbudding should be remembered; that as the leaves are the natural mode by which the stored-up sap is converted into wood, if a large quantity is removed at once, it frequently induces gum and other diseases. The more forward foreright shoots should therefore be taken off first; after an interval of two or three days, the strongest side buds not wanted for making wood; and thus gradually going over the whole trees two or three times a week, for three or four weeks, which will get the wood left regularly, and the trees will experience no check, which would otherwise be the case. So much has been written about protecting the bloom of the Peach, that I almost fear your readers are beginning to consider it a case incapable of satisfactory explanation. That a deal of mischief is done to the bloom of the Peach, Nectarine, and Apricot, by over-covering, there is no doubt, let the covering be what it may. Netting, canvas, boughs of trees, straw ropes—all of them—if suffered to remain on the trees constantly while they are in bloom, weaken their development, and consequently their setting; while, on the other hand, to fully expose the bloom to the effects of frosty and cold easterly winds, is equally fatal. The safest plan lies between the two extremes; *i. e.*, a protection available when wanted by day, and to place before them each night, excepting in

very mild weather. This plan exposes the bloom fully to the action of the sun and air by day, and even by night when mild, and gives them the requisite protection from frost and cutting winds when wanted; this is to be obtained by canvas, or even hexagonal netting, on rollers made to wind up and let down as wanted. The expense is not very great, and with care the covering will last many years; and, moreover, if the netting is employed, it will be found serviceable at another season, when the ripe fruit will require protection from wasps and flies. The next best substitute we have used (which, however, is not to be obtained in every locality), is the spray from Beech trees with the dry leaves of the preceding summer on; these are light and open, admit a good share of air to the bloom, and at the same time break the effects of frosty and cutting winds. They must of course be tied or nailed to the walls, and remain on the trees during the blooming period; as the danger decreases, remove them by a few at a time, so as not to expose the trees all at once.

Retarding the bloom, in the same way, has its advocates and opponents. The rationale of the practice is this:—If the Peach can be kept from blooming for a fortnight, say from the second or third week in March to the second week in April (which was the case last year, owing to the lateness of the season), the chances are that at the latter period the weather will be more settled and the temperature higher, and that, therefore, independent of protection, a crop is more certain, other causes being the same. But retarding by shading is a bad practice, as this also has a tendency to weaken the bloom. The best way is to tie the wood away from the walls to rods, supported by stakes; the wood is thus cut off from the heat the wall absorbs from the sun's rays, and is, moreover, fully exposed to the full influence of wind and weather, which will prevent the blooms from opening so soon by ten days or a fortnight; when they are no longer safe, untie them and nail them to the wall. If the wood has been well ripened, I find this plan very efficient in keeping the bloom from opening so early, and thus they flower all the stronger for it, as the weather hardens the wood.

(*To be continued.*)

BEST DAHLIAS.

It is some time since I had the pleasure to offer so valuable a list of Dahlias as the following. It is not too much to say that all growers with whom I am in the remotest degree acquainted have, with the characteristics of true florists, enabled me to frame a return so universal that it will serve the country at large as a standard for the year.

I know how valuable the space of the *Florist* is, and have therefore condensed the lists with my utmost care, yet not, I would hope, in a manner at all to impair their usefulness. My application was for the names of the best 36 varieties; it will be found that 20 such lists have been received, for which I tender my best thanks; but to have given them in detail would, I think, have rather injured than benefitted the cause for which they were collected. When I state that the whole number

enumerated extends to 114 varieties, it will be seen that in giving those with the greatest number of votes the main point will have been accomplished.

It would not be without interest if some one of our statistical friends were to test these returns by the winning flowers at the close of the coming season, and to report the issue to growers at large.

The returns are by Mr. T. Barnes, dealer, Stowmarket, Suffolk; Mr. Cook, Notting Hill, private; Messrs. Downie & Laird, Edinburgh, dealers; the Rev. C. Fellowes, Norwich, private; G. Holmes, Esq., Norwich, private; Mr. Jarvis, Camberwell, private; Mr. Keynes, Salisbury, dealer; Mr. Legge, Edmonton, dealer; Mr. Oswald, Edinburgh, private; Mr. Pope, Pimlico, private; Mr. Perry, near Birmingham, private; Mr. Robinson, Pimlico, private; Messrs. Robertson, Paul, & Co., Paisley, dealers; Mr. Schofield, Leeds, dealer; Mr. Smith, Hereford, dealer; Messrs. Soden & Son, Woodstock, dealers; J. Sladden, Esq., Sandwich, private; C. K. Sivewright, Esq., Edinburgh, private; Mr. Turner, Slough, dealer; and Mr. Walker, Thame, dealer. By a coincidence worthy of comment, the dealers and private growers are on a par—ten of each.

	Votes.
1. Duke of Wellington (Drummond) *returned by all*	20
2. Fanny Keynes (Keynes) ,, ,,	20
3. Pre-Eminent (Fellowes) ,, ,,	20
4. Rachel Rawlings (Keynes) ,, ,,	20
5. Sir F Bathurst (Keynes) ,, ,,	20
6. Robert Bruce (Drummond), *returned by all*, except Mr. Barnes	19
7. Sir C. Napier (Hale) ,, ,, except Mr. Jarvis	19
8. Annie (Rawlings), *by all*, except Mr. Jarvis and Mr. Schofield	18
9. Empress (Prockter) ,, except Mr. Schofield and Mr. Walker	18
10. Lilac King (Rawlings) ,, except Messrs. Downie & Laird and Mr. Robinson	18
11. Lord Bath (Wheeler) ,, except Mr. Jarvis and Messrs. Soden	18
12. Miss Caroline (Brittle) ,, except Mr. Jarvis and Messrs. Soden	18
13. Amazon (E. Holmes) ,, except Messrs. Downie & Laird, Mr. Pope, and Mr. Oswald	17
14. Mr. Seldon (Turner) ,, except Mr. Cook, Mr. Keynes, and Messrs. Soden	17
15. Ruby Queen (Keynes) ,, except Mr. Jarvis, Mr. Pope, and Mr. Walker	17
16. Annie Salter (Salter) ,, except Messrs. Downie & Laird, Mr. Oswald, Mr. Smith, Mr. Sivewright, and Messrs. Robertson, Paul, & Co.	15
17. Sir J. Franklin (Turner), *by all*, except Messrs. Downie & Laird, Mr. Legge, Mr. Oswald, Messrs. Robertson, Paul, & Co., Mr. Schofield, and Mr. Sivewright	14
18. Sir R. Whittington (Drummond), *by all*, except Mr. Barnes, Messrs. Downie & Laird, Mr. Keynes, Messrs. Robertson, Paul, & Co., Messrs. Soden, and Mr. Sivewright	14
19. Beauty of Slough (Bragg), *by all*, except Mr. Barnes, Mr. Fellowes, Mr. Holmes, Mr. Legge, Messrs. Robertson, Paul, & Co., Mr. Smith, Messrs. Soden, and Mr. Sladden	12
20. Bob (Drummond), *by all*, except Mr. Cook, Mr. Fellowes, Mr. Jarvis, Mr. Keynes, Mr. Robinson, Mr. Perry, Mr. Pope, and Mr. Walker	12
21 Fearless (Barnes), *by all*, except Messrs. Downie & Laird, Mr. Fellowes, Mr. Holmes, Mr. Oswald, Messrs. Robertson, Paul, & Co., Mr. Sivewright, Mr. Turner, and Mr. Walker	12
22 Admiral Dundas (Lawton), *was returned by* Mr. Cook, Downie & Laird, Keynes, Oswald, Perry, Robertson & Paul, Robinson, Smith, Sivewright, Sladden, and Turner	11

23 Constancy (Hopkins), *returned by* Mr. Cook, Downie & Laird, Fellowes, Holmes, Oswald, Perry, Smith, Soden, Sivewright, Turner, and Walker 11
24 John Keynes (Dodds), *returned by* Mr. Barnes, Downie & Laird, Jarvis, Keynes, Oswald, Perry, Robertson, Paul, & Co., Schofield, Smith, and Sivewright 11
25 Lady Folkestone (Keynes), *returned by* Mr. Cook, Downie & Laird, Keynes, Legge, Oswald, Perry, Smith, Soden, Sivewright, Sladden, and Turner 11
26 Miss Spears (Lamont), *returned by* Mr. Barnes, Cook, Fellowes, Holmes, Legge, Pope, Robinson, Soden, Sladden, Turner, and Walker . 11
27 Nigger (Fellowes), *returned by* Messrs. Downie & Laird, Fellowes, Holmes, Oswald, Schofield, Smith, Soden, Sivewright, Sladden, Turner, and Walker 11
28 Triumphant (Keynes), *returned by* Mr. Cook, Fellowes, Holmes, Keynes, Pope, Robertson, Paul, & Co., Schofield, Soden, Sladden, Turner, and Walker 11
29 Essex Triumph (Turville), *returned by* Mr. Cook, Fellowes, Holmes, Jarvis, Keynes, Pope, Robinson, Smith, Sladden, and Turner . . 10
30 General Faucher (Rose), *returned by* Mr. Barnes, Jarvis, Keynes, Legge, Perry, Pope, Robertson, Paul, & Co., Soden, Sladden, and Walker 10
31 Incomparable (Ablitt), *returned by* Mr. Barnes, Fellowes, Holmes, Jarvis, Legge, Robertson, Paul, & Co., Schofield, Soden, Turner, and Walker 10
32 Malvina (Howard), *returned by* Mr. Cook, Downie & Laird, Fellowes, Holmes, Keynes, Pope, Smith, Sivewright, Turner, and Walker . 10
33 Espartero (Turner), *returned by* Mr. Barnes, Cook, Downie & Laird, Fellowes, Schofield, Smith, Sivewright, Turner, and Walker . . 9
34 Mrs. Rawlings (Rawlings), *returned by* Mr. Barnes, Downie & Laird, Keynes, Oswald, Perry, Robertson, Paul, & Co., Smith, Soden, and Sivewright 9
35 Agincourt (Fellowes), *returned by* Mr. Cook, Downie & Laird, Fellowes, Holmes, Robertson, Paul, & Co., Robinson, Sladden, and Turner . 8
36 Miss Susan (Drummond), *returned by* Mr. Barnes, Fellowes, Holmes, Oswald, Perry, Pope, Robertson, Paul, & Co., and Robinson . . 8
37 Cossack (Fellowes), *returned by* Messrs. Downie & Laird, Fellowes, Holmes, Robertson, Paul, & Co., Sivewright, Sladden, and Turner 7
38 Edmund Foster (Turner), *returned by* Mr. Cook, Fellowes, Holmes, Legge, Oswald, Turner, and Walker 7
39 Queen of Whites (Drummond) *returned by* Mr. Barnes, Jarvis, Pope, Schofield, Smith, Turner, and Walker 7
40 Richard Cobden (Stein), *returned by* Mr. Fellowes, Holmes, Jarvis, Perry, Pope, Robinson, and Sladden 7
41 Beauty of the Grove (Burgess), *returned by* Mr. Cook, Jarvis, Legge, Robinson, Schofield, and Soden 6
42 Mrs. Seldon (Turner), *returned by* Mr. Perry, Pope, Robinson, Soden, Sivewright, and Sladden 6
43 Queen of Lilacs (Turner), *returned by* Mr. Holmes, Legge, Pope, Robinson, Sladden, and Walker 6
44 Ringleader (G. Holmes), *returned by* Mr. Fellowes, Holmes, Schofield, Smith, Soden, and Walker 6
45 Salvator Rosa (Miquet), *returned by* Mr. Cook, Fellowes, Keynes, Perry, Sladden, and Turner 6
46 Bishop of Hereford (Union), *returned by* Mr. Cook, Fellowes, Jarvis, Smith, and Sladden 5
47 George Villiers (Union), *returned by* Mr. Barnes, Legge, Robinson, Soden, and Walker 5
48 Magnet (Kimberley), *returned by* Mr. Barnes, Jarvis, Legge, Perry, and Schofield 5
49 Primrose Perfection (Keynes), *returned by* Messrs. Downie & Laird, Robertson, Paul, & Co., Schofield, Soden, and Walker 5
50 Sir R. Peel (Drummond), *returned by* Mr. Legge, Perry, Robinson, Soden, and Walker 5

The following eleven varieties have been returned by four growers: Cœur de Lion, Diadem, Edwin Harrison, Exquisite, King of Yellows, Louisa Glenny, Ne plus Ultra, Port Royal, Rosea elegans, and Scarlet King; and these ten varieties by three growers: Absalom, Admiral, George Glenny, Glenlyon, Goldsmith, Lady Mary Labouchere, Plantagenet, Royal Sovereign, Shylock, and White Standard. These ten sorts get each two votes: Colonel Baker, Deutche, Duchess of Kent, General Canrobert, Immortal, King of Dahlias, Mon Dugere, Morning Star, Mrs. B. Stowe, and Queen of Beauties—equal to 81 varieties. There yet remain thirty-three sorts, each with but a single vote. Of these, not one is returned by that leviathan grower, Mr. C. Turner, and therefore not worth occupying the pages of the *Florist* by enumerating them. Mr. Keynes gives one vote each to Haidee and Omar Pacha. I therefore for the present close from public gaze 31 sorts, leaving 83 varieties from which to make selections.

Of the 50 most popular sorts I think I am correct in assigning 12 as emanating from Mr. Keynes's establishment, and 20 from the Royal Nursery; five sorts were raised by Mr. Sainsbury, although bearing the name of Drummond or Turner; four sorts were raised by the Rev. C. Fellowes. Mr. Keynes also has many sorts to which his name is affixed, that were raised by Mr. Brown, Mr. Dodds, &c. Mr. Rawlings claims the parentage of some sterling sorts, while Mr. Barnes and Mr. Bragg are represented by only one sort each.

Of these 50, 15 were sent out in 1855, eight in 1854. Essex Triumph has been before the public by far the longest, dating back to 1843. Richard Cobden was sent out in 1848, and the only variety of that year now enumerated; 1849 gave us Mr. Seldon, Duke of Wellington, and Fearless; these, after seven years' probation, maintain forward positions, the Duke being one of five sorts returned by the whole twenty growers. What a triumph for Mr. Sainshury, its raiser!

In conclusion, I give the returns received in reply to my hurried application for the names of the best twelve fancy varieties; these are treated in the same way, except the use of initial letters by way of abbreviations; these will doubtless be readily understood.

B., Mr. Barnes; DL., Messrs. Downie & Laird; F., the Rev. C. Fellowes; J., Mr. Jarvis; K., Mr, Keynes; L., Mr. Legge; Po., Mr. Pope; Py., Mr. Perry; R., Mr. Robinson; RP., Messrs. Robertson, Paul, & Co.; Sc., Mr. Schofield; Sm., Mr. Smith; Sl., Mr. Sladden; T., Mr. Turner; and W., Mr. Walker; in all 15.

		Votes.
1.	Baron Alderson (Perry), *returned by all*	15
2.	Duchess of Kent (Knight) ,, ,, except DL.	14
3.	Pigeon (De Knyff) ,, ,, except J. and Sc. . .	13
4.	Miss Frampton (Rawlings) ,, ,, except B. F. J. . . .	12
5.	Gloire de Kain (Cailloux) ,, ,, except F. K. L. R. RP. .	10
6.	Topsy (Keynes) ,, ,, except F. J. Py. R. Sm. .	10
7.	Triomphe de Roubaix (Busine),, ,, except J. Po. R. RP. S. W.	9
8.	Laura Lavington (Keynes) *returned by* J. K. Po. R. Sc. Sm. Sl. W.	8
9.	Butterfly (Salter) ,, F. J. Py. R. RP. Sl. T. .	7
10.	Comet (Keynes) ,, DL. F. K. L. Py. R. Sm. .	7
11.	Imperatrice Eugenie (Addis) ,, DL. F. K. Py. R. Sm. Sl. .	7
12.	Empereur de Maroc (Haidoux) ,, DL. F. L. Po. RP. Sm. .	6
13.	Marvel (Pope) ,, DL. K. L. Py. RP. T. .	6
14.	Mrs. Hansard (Edwards) ,, J. Py. R. Sc. Sl. W. . .	6
15.	Elizabeth (Prockter) ,, K. Po. Sl. T. . . .	4

			Votes.
16. Miss Herbert (Keynes)	*returned by*	Po. Py. R. Sm.	4
17. Admiration (Green)	,,	J. Sm. W.	3
18. Miss Ward (Turner)	,,	DL. F. RP.	3
19. Phaeton (Miquet)	,,	P. R. W.	3

The following eight sorts have each two votes: Claudia, Duchesse de Brabant, Flora M'Ivor, Forget-me-not, Janas, Lady Grenville, Reine des Fleurs, and Wonderful. Fourteen varieties having each but a single vote are therefore not given in detail. It will be observed that the 15 lists extend to 41 sorts; of these but one, Baron Alderson (Perry) obtains what I may term universal suffrage.

Originally, I believe, the fancy Dahlia was introduced to our notice by our Gallic neighbours, and for a time we were indebted mainly to imported varieties; this is not now the case, as will be evident from these returns, the majority of the varieties being those of home produce.

Again thanking those gentlemen who so readily responded to my application, and trusting they may not regret the use I have made of their ideas, I subscribe myself theirs faithfully,

JOHN EDWARDS.

PELARGONIUMS.

IN trying to judge of the progress made in the improvement of florists' flowers from one year to another, we are sometimes unable to perceive any great advance. Now and then, certainly, a list is made, and all can see at a glance the improvement that is made; but to gain a clear and definite idea of what has been done, it is needful to look back for a few years, that, by comparing the favourites of the past with the new flowers, we may be made aware of what has been achieved. These reflections occurred to my mind on looking over the plates in the *Florist*, and contrasting that of Pelargoniums in the first number with those in the number for September, 1854, and certainly the most uninitiated could not fail to be struck with the immense improvement that has been effected in those seven years, and it should be particularly noticed that this improvement has been effected upon flowers already highly cultivated, and which it was thought by the talented editor of the *Gardeners' Chronicle* could not be surpassed, when he recommended seedling Pelargonium raisers to give up their pursuit and try some fresh crosses of the wild species, according to a long series of directions given in the *Chronicle*. But I am not aware that any one has followed them; and the rich success that has rewarded those who persevered in their own way, proves how incorrect were the editor's views. Perhaps he was misled by the high-sounding names sometimes given; for we have had the "Perfection" of one raiser, the "Victory" of others, and "Defiance" often hurled about, and he might take it for granted that raisers themselves really thought they had reached perfection; but it may now be, I confess, somewhat difficult to point out in what Hoyle's "Wonderful," one of the varieties figured in Plate 92, can be improved upon. Of course, we now want to get every

variety of colouring on flowers of equal merit as to form, and size, and quality, which, no doubt, will be done in time, and probably new beauties will be brought out of which none but the ardent seedling raiser ever dreamed. I know of no flower that presents so great a variety of colouring and fine form as some of the new varieties, and we may confidently anticipate still greater things in this justly favourite flower.

The exhibitions have, no doubt, been very useful in stimulating the cultivation and the raising of seedling Pelargoniums, and I believe the collections from Slough exhibited last season at Gore House, the Crystal Palace, and Regent's Park, were by far the best, both in quality and cultivation, that ever were seen. It would be well had the general cultivation kept pace with the examples exhibited at the shows, but, alas! it is far from being so;* to see a house or a collection of Pelargoniums even decently grown, is a rare exception. I saw a houseful the end of last February, with the main shoots scarcely an inch long and the leaves about the size of a shilling—a state of growth which they ought to have attained full five months before. What can be expected of such plants? May and June is the natural period of their blooming, and they cannot be had in *good* bloom at other periods. And this is no exceptional case, but is nearly the rule; the plants are not *cultivated*, they are barely kept alive. The first error is their not being cut down early enough, so that neither the cuttings nor the old plant have time to make sufficient growth before winter; then they are huddled together, often in a cold damp house, half their leaves either *fogged* or eaten by the green-fly, so that spring and blooming time finds them not only unprepared to give a generous head of flower, but, *lank* and *sickly;* they are not really fit to furnish cuttings, and their most appropriate place is the rubbish heap. No plant better repays good treatment, and I would ask all who profess to grow it to bear this in mind; there is no secret in the best cultivation, and no difficulty, the needful conditions of success are easily learned, and as easily followed by all who *try* to succeed.

AN OLD GERANIUM GROWER.

FRUIT TREES AND FRUIT TREE PROTECTION.—No. II.

MR. BAILEY says: "In this county I can adduce many instances of trees in the villages known as the 'Apricot villages,' where trees have not failed in bearing heavy crops for many years running, and which have scarcely ever been touched by a knife since they were in the nursery." I can easily believe this, more particularly from what Mr. Bailey says afterwards; but I think "*heavy cropping for many years running*" a practice which cannot be too strongly reprobated. These Apricots of the "Apricot villages" are Apricots only in name—they are nearly all stone and very little flesh. Hear what the Editor of the *Gardeners' Chronicle*" says: "It is an axiom in applied physiology that no animal or plant can bear more than its system can nourish;

where an attempt is made to contravene this natural law, abortion is the result, or the produce, whether animal or vegetable, if it survives, is degenerate or imperfect. Let a Pear (the case is applicable to any other kind of fruit tree) contain a pound of nutrition, or natural food, ready to be attracted into its spurs, let each receive a drachm of such food, then the tree may carry 256 spurs, supposing the food to be equally distributed. But if a thousand such spurs are present, it is probable, not that 750 will be starved and 250 fed, but that the whole will be starved: in the struggle among them for food none will obtain what is requisite to sustain life, and all will perish." The truth of the foregoing Mr. Bailey will not, I think, question. If, then, those trees in the "Apricot villages" have never failed in bearing "*heavy crops for many years running*," must we not conclude that at the end of these "many years" bearing heavy crops, the fruit is worthless—as in reality it is—and not like the fine spotted, rosy, large, luscious fruit, which the trees here bear *annually*—not *biennially*—and which many gardeners can corroborate?

I know a Vinery, which, like the trees in the "Apricot villages," has, for "*many years running*," borne very *heavy* crops of Grapes. The person to whom it belongs once told me, that he had the finest crop of Grapes in England. When I inquired how many bunches were on each Vine, I was told, upwards of forty bunches. I saw some of these Grapes afterwards—and *such Grapes*—as much like Grapes as the Apricots of the "Apricot villages" are like Apricots; they were Grapes in name only—not such as Mr. Bailey would like to acknowledge as his growing, nor were they such Grapes as I have exhibited at the Midsummer Shows at York the last four years successively, and to which was awarded the first prize each season.

Need I tell Mr. Bailey, I did not leave forty bunches on a Vine.—No, I am sure I need not. In size of berry, for colour, bloom, and flavour, better Grapes than these were never exhibited at the Chiswick shows in their palmiest days: I have seen larger bunches. Yet there was no mystery in the growth of these Grapes. The house is an old lean-to, heated with a flue; but bear in mind, the border is all right—the roots do not perish in the winter—the Vines are never *overcropped*—the berries are always *thinned immediately* they are set, the wood is also kept *thin*, not *overcrowded*: these, with proper attention in heating and giving air, are all the means that were adopted in the production of these Grapes. And here I would ask how it happens, that we do not always see Grapes of superior quality in *all* Vineries, which we ought, if glass and heat were all that is required:—the cause is in badly made and badly drained borders, together with bad management. So it is with the covering of wall-fruit trees, if not accompanied with good management. Apricots, in the market here, were, last year, four shillings per score; this season, the best samples will not be more than two shillings per score, and I make no doubt there will be some samples, as there were two years ago—like the Apricots of the "Apricot villages"—that will not realise more than fourpence per score.

Mr. Bailey says, "Why is it that we almost always see the appa-

rently ill-cared for and ill-trained trees of the cottagers producing fine crops of fruit, and generally much overcropped? It is, in my opinion, for the reason I am about to give. There can," continues Mr. Bailey, "be no doubt the more massively a wall is built, or the thicker it is, even if hollow, the longer it will be in radiating at night the heat it has accumulated during the day." This kind of theory looks very well on paper, but practically it amounts to nothing. I wonder how much heat a thick wall would accumulate during a month like March, 1855. "The walls," continues Mr. Bailey, "of the cottages about here are generally built of thick stone, and, in addition to the heat absorbed by the sun's rays, they are warmed internally by the fire of the house; the wall, therefore, of every cottage is, in fact, a hot wall, slowly giving off its heat to the tree trained upon it, and repelling the action of frost, while the projecting thatch or tiles keep all perfectly dry, and arrest the heat radiated from the surface of the wall." Here we have hot walls introduced, of which I have not expressed any opinion, but of which I am as great an advocate as Mr. Bailey. Mr. Bailey makes these hot walls stand in the place of coverings. If I were in search of a fact to support what I have so often advanced, I have it in these hot walls of Mr. Bailey's cottages; the soil round the foundations of these thick hot walls must, of course, be dry and warm —what a grand place for the roots of Apricot trees to luxuriate in—and then we have the wood trained to these hot walls: the roots dry and warm, the wood trained on a hot wall—what favourable conditions to ensure well-ripened wood and thoroughly matured buds, and, as a natural consequence, plenty of fruit, which, owing to their not being thinned, are almost worthless. In April last, Mr. Bailey said, "Let our inquiry, then, be this: By what means can we best retard the progress of the abundant blossom with which our fruit trees in the open air are this spring covered." Pray, how do those cottagers retard the progress of blossoms on their hot walls in early springs? We are not informed of this, which is a very material point; for if these cottagers, without retarding or covering, get heavy crops of fruit many years running, is it not a proof of what I have so often said, viz.—that with dry warm borders, and well-ripened wood, we may dispense with coverings. Mr. Bailey winds up thus: "Remember, then, gentle reader, that at Strathfieldsaye there is as fine a wall of Apricots as any in the country, which produced no fruit till protected, and yielded a splendid crop the first most trying season after its application." How Mr. Bailey could pen the above, after all he had just before told us of the doings at Strathfieldsaye, is to me an enigma. In the same article Mr. Bailey informed us, that "Mr. Johnson, his grace's gardener there (Strathfieldsaye), has for years lost his crop of fruit; till, under the advice of Mr. Parkes, the eminent drainer, he adopted the Deanston plan of *deep drainage*, coupling with it an efficient canvas screen, with temporary copings removable at pleasure." . . . "The result was, that from being the latest garden in the neighbourhood, it has become one of the earliest." Mr. Bailey quotes Mr. Johnson's words: "Many persons," says Mr. J., "who visited me were sceptical as to the advantages of deep draining, but after examining the test holes,

invariably went away converts." Again, Mr. Johnson says: "I saved a good crop of fruit this season, which, without covering, I should not have done." What! then deep draining, though it has made Mr. Johnson's garden, from being the latest in the neighbourhood to be one of the earliest, has done nothing towards securing a crop of fruit. How does Mr. Johnson know that he would not have saved a crop of fruit last year without covering? It appears he never covered his trees until he adopted the plan of deep draining. If, before he adopted the plan of deep draining, he had covered his trees, and year after year secured good crops, then, in his case, we would be compelled to admit the benefit of covering. But as Mr. Johnson has not done so, I cannot admit that the crop of last year was owing *solely* to his covering.

This is the real point between Mr. Bailey and myself. He ascribes everything to retarding and covering: I do not. I think much of the good results are due to thoroughly drained borders, well ripened wood, &c. Mr. Bailey believes that Mr. Johnson's crop was owing *solely* and *entirely* to the covering: I do not. I am of opinion it was owing more to his deep draining, and consequently to the wood being better ripened. Mr. Bailey says: "Mr. Spencer, of Bowood, uses broad projecting coping boards, and makes breaks in his walls, to shelter his trees from the cold, cutting winds." But Mr. Bailey did not tell us that Mr. Spencer, before he applied these, thoroughly drained all his borders, and renewed some of them. This, Mr. Bailey omitted to tell us, which is a very important affair. I can ascribe his success more to this than to the use of coping boards, &c. When I visited Bowood, in October, 1853, though very much pleased with everything about that beautiful place, the wall-fruit trees pleased me more than anything I saw. Widely different was the appearance of the trees then to what it was twelve years before. I ascribe this great change to the thorough draining and renewal of the borders. Mr. Bailey may, as I dare say he will, attribute it to the coping boards. If Mr. Spencer had left his borders in the state they were sixteen years ago, he might use coping boards in vain. Mr. Bailey thinks that retarding and covering will alone secure good crops. Though I do not object to coverings, if people like to use them, I still am of opinion that by thorough drainage and improvement of the land—by proper selection of stocks, scions, and sorts—by proper cultivation, especially disbudding and summer pruning—by thinning of the spurs, when crowded—and, above all, by never *overcropping*; I say, I am of opinion, that by these means we can, in nine seasons out of ten, secure good crops of fruit. I have done so myself, here, the last seven years.

M. SAUL.

Stourton.

WEIGELA AMABILIS.—This, we presume, like rosea, is a native of China or Japan. It has flowered with Messrs. Low and others, and is a pretty shrub; though, of the two, we certainly think rosea the handsomest. It is figured in the "Botanical Magazine" for January last.

ON DEEP CULTIVATION.

WERE we to examine the depth to which the roots of many of our cultivated plants will penetrate a loose open soil in quest of food, we should be less sceptical as to the advantages which deep cultivation affords to the roots of plants. The market gardeners around London trench often and deeply, not only to change the surface, as some suppose, but to allow the roots of their crops to range as deep as they please, and without this assistance the enormous crops of first-rate produce they obtain from the land could not be obtained. If deep cultivation is requisite in the rich and deep alluvial soils of the Thames valley, how much more so is it on poor and shallow soils, which afford comparatively only a limited pasturage for the roots of plants.

It is true, gravelly and rocky subsoils are almost beyond the reach of improvement; as the expense of breaking up the substratum would, in most instances, be too great to pay. But this is not always the case, for I have seen the brashy subsoil of some localities broken up with good results, as well as some gravelly subsoils, particularly where the layers of gravel are thin and mixed with clay or ferruginous matter, rendering them impervious to water, as well as to the roots of plants. By breaking through this crust, so as to admit a free passage for the water, a marked improvement follows. Clay subsoils, however retentive, are capable of being reclaimed; but this is a work of time, as all you can do, after thorough drainage, is to break up the clayey bottom to the depth of twelve or eighteen inches, according to its nature, each time the ground is dug or trenched. This bottom, when forked up, should be kept as open as possible, which will facilitate the passage of water through it, and the salts and ammonia carried down by the rains from the manuring, &c., of the upper soil will in time reduce its tenacity, assisted by the decomposing action of the air, which will now have better access to it; and in a few years, by practising this, you will find your land gradually increasing in depth and productiveness. Many calcareous and slaty rocks are likewise capable of improvement when broken up and exposed to the action of the weather, and when shallow soils rest on these descriptions of rocks, by all means, break up a stratum of it yearly, below the top soil. Many hard compact marls of the red sandstone and lias formations are as unfavourable for the growth of plants as rock or gravel, and yet when broken up and exposed to atmospheric influences, they make fertile soils capable of producing every kind of crop. I remember some fifteen or sixteen years back paying a visit to the garden of the late E. Davis, Esq., of Bath, whom many of your readers will recollect was the first amateur Dahlia grower of that day, and his plants were growing apparently in a mass of stones. The garden of this gentleman was situated on the side of one of the oolitic ranges which surround Bath, with barely a covering of soil over the rock; this Mr. Davis had broken up two feet in depth, and had mixed with it the surface soil and a little manure; the luxuriance of his Dahlias and general garden produce was remarkable, and may perhaps be remembered by those of your readers who visited Entre-hill at the time in question.

To obtain a sufficient depth of soil for the roots of vegetables to penetrate is one means, and a great one, of increasing their produce. Plants growing in soils made open for a considerable depth are much less liable to suffer in dry weather, as their roots are in a position to obtain moisture at a lower depth, and hence the suitability of deep soils for summer crops; the same soils are likewise warmer in winter. A soil from which the water passes through freely can never be very damp, and relatively never very cold; nor are they so dry in summer, for this reason, the action of the sun's rays on the surface soil causes the moisture therein to be given off by evaporation, and this produces an *upward* action of the moisture contained in the soil below, to supply that which has escaped by exhalation and the surface. We shall find, then, that in proportion to the power of the evaporating process on the surface there will be a corresponding rise of watery particles throughout the entire mass of soil below. This will positively keep the soil moister, because it is more open and porous, than a shallow soil, with a compact subsoil, which would obstruct the progress of moisture from below, at the same time as it prevented its escape downwards. By all means then for vegetables, have a mass of soil, if practicable, from two to three feet deep, sufficiently open to admit air and water to pass freely each way when needed. X. Y. Z.

NOTES ON THE MONTH.

SINCE writing my last remarks the weather throughout the month (March) was cold and hazy, with keen easterly winds, varied only now and then by a bit of sunshine. On the night of the 27th there was 12° of frost, and about 15° on the 29th and 30th. Severe for the season, the air up to the 1st of April was remarkable for its dryness, even for March. On the 1st of April we had a change and milder weather; from this time up to the 14th there was rain almost daily, which swelled the brooks and filled the springs to overflowing. On the 14th the wind shifted back to its old quarters, the East—piercing, and at times blowing a gale, with frosts on the 19th, 20th, and 21st; to-day (23rd), there is a change indicating rain. If we are to credit "Howard," the ensuing summer will be a dry one, the winds during the vernal equinox being E. and N. E. The temperature for the last two weeks has been rather above the average, but yet the season is by no means a forward one, owing to the low temperature of March and part of April.

The weather, on the whole, has been more favourable for the farmer than the gardener. Young Cauliflower, Lettuce, and other early vegetables which we noticed as suffering last month, have not progressed with the season, owing to the absence of mild, genial weather. Potatoes and root crops generally have been got in well, and the present weather is favourable for clearing foul land, completing alterations, preparing borders, &c.

The main task before the gardener just now is the flower-garden work; and during the next month, everywhere, "bedding-out" will be

the all-engrossing care. About this I am glad to notice good taste is beginning to sicken with the everlasting repetition of red, yellow, and blue, with which colours almost every garden—from that of the palace down to the humblest manse—has been crammed for the last few years. Not that I object to masses of colour—not I—but I like to see the thing properly done. Artistically, if you like that word better;—and, as we have a whole range of colours, we may as well make them enter into combination a little, as dab them about in spots. To do this there are two ways of managing the matter:—one, by keeping one colour to a bed, having the brightest and most distinct in the middle, and shading them down to the margin by varieties of less intense colour—excepting where the mass is a great one, when a band or divisional line may be introduced;—the second is to blend the colours, by planting rows or bands of different colours round a centre. When the plants employed are judiciously selected, according to their habit and colour, most pleasing combinations of colours can be obtained—the same results follow planting in borders in right lines. In this style a great variety of plants can be introduced, and the general effect is pleasing and harmonious. By-the-bye, will nobody have a word to say in favour of some old friends in the shape of Larkspurs, Campanulas, and other herbaceous plants? What is really so fine as the now neglected Double Siberian Larkspur, unless we might find it with our old friend at Dropmore, who I like all the better for sticking to these old-fashioned things?

I had nearly filled my space, Mr. Editor, without saying one word about fruit trees, on which I see there is a vehement discussion in your columns, into which I do not care to enter. For certain, however, Apricots "caught it" last month; there are, however, enough left for a crop. Peaches appear to be safe, or nearly; but I am sorry to see, in places, evidences of gum, resulting from the autumn of 1855 not being so favourable for ripening the wood as 1854. Plums and Cherries are now in full bloom, how they will escape the frosts of the last few nights is more than I can say now; one thing in their favour is that the air is very dry. Early Pears, the same; some kinds are not out yet—the bloom appears scant. Apples, on the contrary, abundant.

As a hint worth remembering, I say, for this next month care more about keeping the tops of newly-planted trees, &c., *damp*, than their roots.

By way of postscript let me add that the subscription-list for raising the 5000*l.* required by the Council of the Horticultural Society to enable them to carry on the Garden, fills slowly. Let the nobility of England take for example the *noble*-minded *German*, H. Behrens, Esq., who so liberally subscribed 100*l.*, and the list would soon be complete.

G. F.

NATIONAL FLORICULTURAL SOCIETY.

March 27.—As the meetings of this Society give greater opportunities than are afforded by any other society for seeing seedling florists' flowers as well as new plants, it is our intention to report fully

the meetings of the season, and we were much gratified at finding this —the first—so well attended. There were a great many seedling plants, and several novelties were produced. The principal plants were Cinerarias, Hyacinths, Rhododendrons, Camellias, and Geraniums.

Mr. Williams, gardener to A. Farrie, Esq., Liverpool, exhibited two new Rhododendrons: Hookeri, of a deep rich coral crimson colour, and a beautiful variety, as well as very dissimilar; also a light kind named nervosum, with large noble foliage, but the flower is not very attractive. Messrs. Wood and Ingram, of Huntingdon, received a certificate of merit for a bright-coloured Geranium, named Crimson King. This is by far the best variety we have seen for early work, the habit is so good; a very free grower as well as flowerer, and of much better form than those hitherto grown for forcing. It appears to be a continuous bloomer.

Messrs. Henderson and Co., of Pine-apple-place, received a first-class certificate for a Camellia named Enfant de France, rosy crimson, very double, and of the finest imbricated form. Mr. Gaines, of Battersea, received the same award for a white Camellia named compacta alba. This also is of fine form, but not a large flower.

Mr. G. Smith, of Hornsey-road Nursery, received a certificate for his blue-tipped Cineraria, Princess Royal. This is a showy bright variety with clear white ground, but the ends of the petals are square instead of being well rounded. Mr. C. Turner, of Slough, received similar awards for Lady Jane Peel and Prince of Wales, both white ground flowers; the former being tipped with rosy purple, the latter with bluish purple: they appear to be of good habits, and were of excellent shape. Mr. Bousie, gardener to the Right Hon. H. Labouchere, Stoke Park, sent two kinds, of which Miss Labouchere appeared to be the best; it is tipped similar to Picturata, but has a dark disc.

The Messrs. Smith, of Dulwich, sent a large number of seedlings, some of which were of new shades of colour, but deficient in form. The best of these were Decision, Pourpre de Tyre, Crimson King, and Beauty of Dulwich.

Mr. Sharman and Mr. Crockford also exhibited seedlings of this showy useful spring flower.

Hyacinths and Camellias were the subjects prizes were offered for in collections. The former were exhibited by Mr. Cutbush, of Highgate; Messrs. A. Henderson and Co., Pine-apple-place; Messrs. E. G. Henderson and Co., Wellington-road; and E. Rosher, Esq., Hamilton-terrace. The prizes were awarded respectively in the order named. The best *Reds* were Mrs. Beecher Stowe, Robert Steiger, Diebitsch Sabalskanski. *Blush:* Duke of Wellington (very fine), Norma, Cavaignac, Catherina. *Dark Blues:* William the First, Laurens Koster, Graff Van Nassau, Baron Van Tuyll, Prince Albert, Mimosa. *Light Blues:* Grand Lilac (very fine), Schiller, Murillo, Bloksberg, Charles Dickens. In *Whites* we noticed as fine, Prince of Waterloo, Mont Blanc, Mammoth, La Tour d'Auvergne, Reine Blanche, La Deese, and Anna Maria. The Camellias were not fine. A. Farrie, Esq., sent the best three blooms; 2nd, E. Rosher, Esq.

April 24.—Cinerarias were the principal feature at this meeting, being shown in considerable numbers and in excellent condition.

Mr. Bousie, of Stoke Park, exhibited two varieties: Mrs. Turner, white tipped with lilac; and Mrs. Edwards, light purple—both possessing good quality, the latter being the best in shape. Mr. C. Lidgard, of Hammersmith, sent two kinds, but in bad condition. Mr. Pope, of Pimlico, had eight seedlings. Vivid was selected by the judges for a certificate—white with bright crimson tip, style of Esther, but of better form. The others were too thin. Mr. C. Turner, of Slough, received a similar award for Mrs. Hoyle, white tipped with crimson purple, marking very distinct and good form. Mr. Turner also exhibited Earl of Clarendon, dark purple with red ring round the disc; Lavinia, lilac with white ring, novel; Admiral Lyons, dark purple with white ring; and Alice, white and lilac rose. These all possessed good properties. Mr. Clark, of Cheltenham, sent a white ground variety with very bright tip, but thin and of bad form. Many others were shown, but none worthy of notice.

Mr. Kinghorn, of St. Margaret's, Isleworth, received a certificate for a seedling Epacris named carnea rubra; its name denotes its colour. It is free, and of good dwarf habit.

Mr. Hamp, of South Lambeth, received a certificate for Azalea potissima, a good-shaped kind, strong grower—colour, rosy salmon marked with crimson in the upper part of the flower—a pretty variety, but not particularly new in colour.

Mr. Beck, of Isleworth, and Mr. Wheeler, Hendon, exhibited early-flowering varieties of Pelargoniums, adapted for forcing. Helen, from Mr. Beck, has pale lilac lower petals, dark top; very free, but dull in colour. Mr. Wheeler's is a white, free, but of bad form. A label of commendation was awarded to the latter. Mr. Hoyle, of Reading, sent two Pelargoniums—Review and Ion. The former, a large free-flowering variety, evidently a very early bloomer. It has a clear white centre, lower petals scarlet rose, top rich dark blotch, shaded bright margin. Ion, a dark variety, of fine substance.

A seedling Heliotrope was exhibited named Florence Nightingale. It is no improvement on Beauty of the Boudoir, if so good.

Messrs. Ivery, of Dorking, sent a well-bloomed plant of their Azalea Criterion, figured by us in 1852. This is a very fine thing.

The prizes offered were for Cinerarias, Auriculas, and Polyanthus. None of the latter were sent, and only two of the former. These were in very good condition. The four best Cinerarias were Rose of England, Magnum Bonum, Emperor of the French, and Brilliant: the two latter are new varieties, both of which received first-class certificates last season, and have well maintained the high opinion then expressed of their merits. These, with a collection of specimen plants, were exhibited by Mr. C. Turner. The same grower also sent a collection of healthy well-bloomed Auriculas. The four exhibited for the prize were Dickson's Unique, Bolivar, Lovely Ann, and Blackbird.

Mr. Richards, of Oxford-street, exhibited a collection of wire baskets for suspending flowers, similar to those so extensively used at the Crystal Palace, and flower-stands made of the same material, some of which are beautifully designed. The baskets are very elegant.

HOW TO HAVE GRAPES FROM THE BUD OR EYE THE FIRST YEAR.

Not long ago Vine growers were startled at the fact of Mr. Elphinstone having fruited pot Vines the same year in which they were struck. We had supposed that to do this the second year was as early as it could be done. But happy are they who live to learn; and though I am not aware how the feat was accomplished by Mr. Elphinstone, I can state a way, if not *the* way how. Strike the eyes in January, grow them *on* vigorously, potting as required; when about two feet long stop them, and when four feet or so stop them again; the laterals from the second stopping produce the bunches. The Vines should now be quickly grown, and in due course the fruit will ripen. Those who have had charge of vineries will recollect how that from repeated stoppings the laterals often show bunches, particularly at the terminal bud. It is by applying such observations that we make progress. We do not think that the practice of so fruiting Vines will become general, still it is worth trying, and perhaps this may be cited as an illustration of the theory, that in a bud are the germs of a perfect tree, which the gardener may develope at will. Geo. M'Ewen, Arundel.

THE ROYAL GARDENS, FROGMORE.

It is now more than two years since we gave an account of these noble gardens, and we believe we need make no apology for again placing before our readers the following memoranda of what came under our notice during a recent visit. The forcing of fruit is carried on very extensively, and forms the principal feature at this season of the year, when each kind is in different stages of forwardness, as required for furnishing a supply up to the period when forced fruit is succeeded by that from the open air.

We noticed eight houses, each varying from sixty to one hundred feet in length, occupied by Vines in different stages of growth. The earliest Grapes are growing at the back of the Pine stoves, situated in the principal range of houses. The crop is a very good one, and fast approaching maturity; indeed, some of the bunches at the warmest end of the house were ripe. The forcing of these Vines usually commences about the end of November, and at that time the fruiting Pine plants are planted in the pits occupying the front part of these houses, and remain there till the fruit is ripe, which is late in the autumn; consequently, the Vines get but a limited season of rest, and although subjected to this severe treatment, they remain remarkably healthy and produce excellent fruit.

The next Vinery for succession is a half-span house, eighty feet long, situated at the back of the principal range; it contains a splendid crop of fruit, which is thinned and swelling fast. They are chiefly Black Hamburghs together with a few fine seedlings raised here.

The Vines in this house have been planted four years, and it is intended ultimately to use this house for forcing early Grapes. Mr.

Ingram has adopted an excellent plan for warming the borders of this house, which undoubtedly will be a great assistance in early forcing. This is done by a hot-water pipe carried round the edge of the borders, placed in a narrow chamber two feet below the surface. From this chamber air-drains run underneath the border to the back of the house; ventilators are fitted to the chamber containing the hot-water pipes, which causes a circulation of warm air to pass under the border to the back of the house.

The large Vinery in the front range is one hundred feet in length; it was *started* the end of January, and the Vines are now in bloom, promising a heavy crop of well-formed bunches; indeed, we never remember seeing Vines more healthy and vigorous. In the same range is another Vinery of the same dimensions, where the Vines are just breaking without the aid of fire heat.

The variety grown in the latest house is "St. Peter's," and they are taken out and tied to stakes in the front of the house, where they will remain until they begin to *break* naturally, when they will be again placed inside. The fruit from these Vines was in use up to the middle of March, so only a few weeks intervene between the late and early Grapes. This house at present is filled with French Beans and Strawberries.

Last season, the Vines in one of the small Vineries in the principal range had become somewhat weak from hard forcing and heavy crops, therefore Mr. Ingram had them cut down in June last, immediately after the fruit was gathered; they soon made strong shoots, and ripened the wood well by the end of the season. The rods are now cut back to about seven feet in length, and there is every prospect of a good crop. Thus a season is gained by the above treatment.

French Beans are grown on all the Vinery borders; some are in full bearing, and others are but just planted. Strawberries are grown in large quantities, and occupy the shelves in the forcing-houses; two small span-roofed houses were also filled with them. We noticed some beautiful ripe fruit of Mr. Ingram's seedling Prince of Wales, which is a favourite sort here for early forcing; British Queen is also largely grown for use later in the season.

In the Plum-house there is a fine crop, and the fruit is beginning to stone. Several varieties are forced, among which are the Washington, Early Orleans, and Green-gage, but the Victoria is considered the best for early forcing. In a division of this house there are two trees of the Jefferson Plum, carrying a good crop. It is an esteemed American variety recently brought into notice. This sort is found to force well, and is also hardy and productive when grown in the open air. On the back wall are trained some promising seedling Peaches and Nectarines, now in fruit. Plants of the Eugenia Ugni are planted in bottomless pots on the border of this house, where they are intended to fruit. They are growing freely in rough loam with a mixture of peat and broken pots. A short account, with a woodcut, of this new fruit-bearing shrub appeared in our February number.

Two span-roofed houses, sixty feet in length, are filled with Cherry-trees growing in pots, and forced every alternate season; after the crop

is gathered, the trees are turned out of the pots and plunged in the open ground, where a fresh set of trees is in preparation for next season. The forcing of the early house commenced the first week in January, and the fruit is now ripening; in the second house they are about the size of Peas, having been started a month later, to succeed those in the early house. In both houses the trees are well furnished with fruit.

The whole of the Pines were looking strong and remarkably healthy, especially those planted in loam on a bed of leaves in the larger fruiting pits, without the assistance of more *bottom heat* than the bed of leaves affords. The heated air is supplied through hot-water pipes placed in the front part of the pit. Some of the best Pines are grown in these pits, and with comparatively very little trouble. The Pines in the principal range are grown much in the same way; only, instead of a bed of leaves, hot-water pipes supply the bottom heat.

Cucumbers are produced throughout the year, and the plants from which the supply is now obtained have been in bearing all through the winter months. The plants are growing in a bed of earth placed over a heated chamber, forming a pit in the centre and back of the house, which is a half-span, and the plants are trained near the glass.

Early Potatoes are looking strong and healthy; they are chiefly grown in cold pits over a bed of leaves, without the aid of fire heat. Carrots, Peas, Turnips, &c., also occupy several *cold pits* and frames.

Most of the plant-houses were exceedingly gay, especially the stoves in the front range, where many varieties of Begonias are now in great perfection. The following are amongst the best:—Albo-coccinea, a pretty variety, with scarlet and white flowers; manicata, nitida, and hybrida, which is an exceedingly good variety, raised a few years since at Cliveden, between manicata and hydrocotylifolia; it partakes of both its parents, and is of good habit and fine foliage. Fuchsioides, Ingrami, and coccinea contrasted well with other varieties of less colour. We also noticed several hybrids raised by Mr. Ingram, among which was nitida rosea, a fine variety of better habit, and the flowers deeper coloured than nitida. Suaveolens rosea is also a great improvement on the old variety. There were also several other seedlings—varieties of Fuchsioides—not yet named. Several other stove plants were in flower—such as Hibiscus rosa sinensis and flore plena, Adamia versicolor, Centradenia rosea, Franciscea Hopeana and confertifolia, and many more, too numerous to admit of their being noticed here.

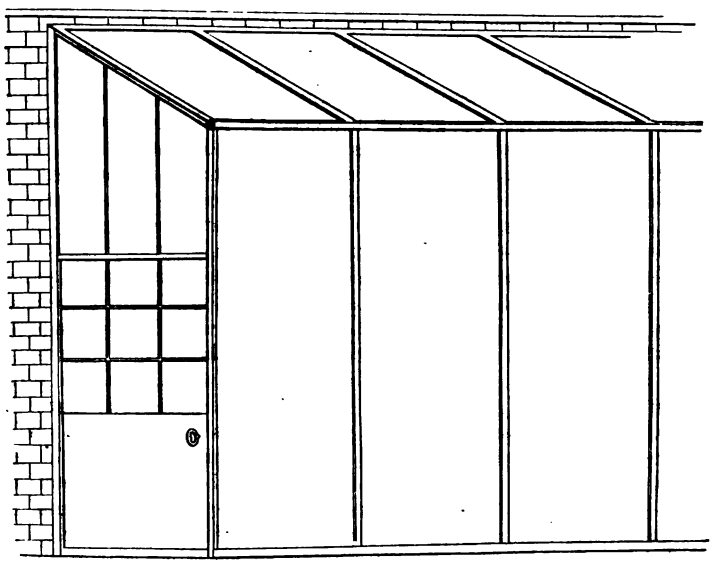
We observed two fine plants of Impatiens Hookeri, not yet in flower, but growing very strong in rough turfy loam.

The greenhouses were also very gay with the different varieties of Cinerarias, Azaleas, Camellias, Ericas, Epacrises, and scarlet Rhododendrons, intermixed with other plants—such as Boronia tetrandra, Dielytra spectabilis, Hardenbergia monophylla, Cytisus racemosus, Deutzia gracilis (a useful little plant for forcing and early spring-flowering), Tropæolum tricolorum, Cyclamens, &c. On the back-wall we noticed a fine plant of Clianthus puniceus, covered with scarlet flowers.

We were much pleased with some seedling Ericas which Mr. Ingram showed us in one of the principal houses. Three varieties—seedlings

from *hiemalis* fertilised with other good kinds—deserve especial notice; these are all decided improvements on *E. hiemalis*, which variety they most resemble; they are all free blooming and of vigorous habit, and the plants were covered with flowers of a purple colour, tipped with white; but one variety, which was considered the best, had more of a carmine tint in it. Several other promising varieties raised between Willmoreana and Linneana, were in bloom, and we hope at some future time to present our readers with coloured illustrations of some of the seedlings which are not yet named.

Among the new erections in these gardens, is a glass-case placed over a portion of a south Cherry wall, which the accompanying wood-cut represents. The principal feature in this glass covering is the plan



which Mr. Ingram has adopted for giving air, viz., the opening of the front sashes, which are nine feet long, and turn on a pivot at each end; when opened they are simply fastened with a small hook. This allows plenty of air in every part without moving the top sashes. This case is eighty feet long and made portable, so that it may be easily moved or packed away when not in use. The trees were in full bloom early in April, and every part of the wall completely covered.

There is an excellent show of all kinds of fruit in the hardy fruit department, and if fortunate enough to escape spring frost, doubtless it will be a season of plenty. The Peach, Plum, and Cherry walls are in fine condition: most of the Peach trees cover a space of two hundred square feet, and are well furnished with bearing wood quite to the stem, with not the least sign of becoming *bare* in any part of the trees. These trees are protected with canvas screens through the spring months.

Strawberries have suffered much in the open quarter from the effects of a wet autumn, and at the same time an attack of mildew; several plants are quite dead, and others so weakened that a crop will be long uncertain; the Filbert and Prince of Wales remain the most healthy. Lettuce plants also suffered from the same cause. All other kitchen crops stood the winter well.

HORTICULTURAL SOCIETY.

April 22.—A large quantity of Sikkim, Bhotan and other Rhododendrons was exhibited on this occasion. Some of them were in flower, but many others were not. The most conspicuous among those in blossom was a pale yellow kind, called R. campylocarpum. This was a standard worked on catawbiense, and having a fine head of bloom, was really very handsome. It was stated to have flowered out of doors at Holkar, near the seashore in Lancashire. Hopes are, therefore, entertained that it may be sufficiently hardy to withstand the vicissitudes of our climate. This came from Messrs. Standish and Noble. Messrs. E. G. Henderson had also an extremely interesting exhibition of these plants, among which were R. Hookeri, of which we soon expect to be able to give a coloured representation, the fragrant Edgworthi, Nuttalli, a Bhotan kind reputed to possess wonderful beauty, Boothi and Javanicum. Messrs. Veitch and Son, of Exeter and Chelsea, sent R. jasminiflorum, which is one of the prettiest tender Rhododendrons in cultivation. Its numerous clusters of long waxy white tubular blossoms make it an object of universal admiration. It may be mentioned as a curious fact connected with this charming genus of plants, that as they approach the eastward of Asia they all more or less partake of the long tubular form of flower; while in Sikkim and Bhotan, the head quarters of the race, the blossoms are for the most part of a more open and spreading character. The same nurserymen also sent Dodecatheon integrifolium, a new kind something like D. Meadia, cut specimens of one of Mr. Skinner's Fuchsias, a Primula, and a variegated East Indian Carex. Mr. Glendinning furnished a fine specimen of Gesnera Doncklaari, which has been figured by us in a former volume. It is certainly a beautiful variety, considerably handsomer than G. discolor. Gaultheria furens, a hardy evergreen from Chili, with little white bell-shaped flowers, like those of an Andromeda, came from Messrs. Standish and Noble. Messrs. Henderson, of Pine-apple-place, supplied a collection of greenhouse plants, in which Tetratheca ericifolia was perhaps the most remarkable, inasmuch as its pale lilac blossoms are sufficiently large and abundant to point it out as just the plant for an amateur who wishes to cultivate a few select kinds, and those only of the best description. Messrs. Lee had some variegated Geraniums and other hybrids, among which was a very pretty Begonia, called Splendida, which was said to be sweet scented. From the garden of the Society also came Begonias and other plants, among which was Nemesia versicolor, a blue-flowered Cape perennial, which it was thought might make a good bedding plant.

After the Rhododendrons and other interesting plants just described. Cinerarias were the most showy and striking. These were sent by Mr. Turner, of Slough, and Messrs. Dobson & Son, of Isleworth. Mr. Turner's were mostly new kinds, some of which, Brilliant, white tipped with blue, and Emperor of the French, crimson with a ring of white round the disc, were by far the best in shape. The other kinds were Magnum Bonum, Scottish Chieftain, Lord Stamford, Mrs. B. Stowe, Loveliness, Rose of England, Ringleader, Optima, Sir C. Napier, and Esther. Messrs. Dobson's plants were well grown and bloomed, but the kinds were indifferent, with the exception of Lady Camoys and Picturata. Mr. Miellez, of Lille, sent two new Azaleas, Modele, rosy purple, a very pleasing flower, of great smoothness and substance, and Madame Miellez, white slightly striped with pale purple, also very good in shape. Both are promising varieties. The Rev. Mr. Beadon, of North Stoneham, sent an interesting collection of cut Camellias, grown on a south-east wall.—Some fruit, in the shape of Pines, Grapes, and Strawberries, were shown, as was also an example of a double iron espalier, concerning which we may have something to say hereafter. Wood of our two British Oaks, from the ancient log church at Greensted, in Essex, were produced, to show that the one is as good as the other as regards durability; at least in this instance, if there was any advantage it was in favour of the Durmast; and it has been proved that the latter grows faster and forms a handsomer tree than the common Oak.

GOSSIP.

THERE is now on private view, at 14, Newman-street, the bark of a portion of the Wellingtonia, stripped off the wood at twenty feet from the surface. The specimen is twenty feet in diameter inside the bark, and gives an idea of this stupendous tree, such as no drawing or description can convey.—*Gardeners' Chronicle.*

The Crimean Snowdrop (Galanthus plicatus), represented lately as a rarity in England, was introduced years ago by the Hon. W. F. Strangeways, F.H.S., who sent plants to Abbotsbury, Melbury, and other places.

The Crystal Palace Company intend this season to test the strength of the Horticultural world. The programme for three grand Horticultural Exhibitions are before the public. The first, which is for one day only, will take place on May 24; the second, a two days' show, on June 25 and 26; and an autumnal one on September 10 and two following days. The prizes to be given for plants and fruits are on a scale commensurate with the list of classes and number of articles in each. The class embraces a wide extent of subjects, well chosen, and we are particularly glad to see provision made for encouraging the humbler class of exhibitors. The prizes offered for the three Exhibitions exceed in the aggregate 2350*l.* Surely there is now something to sharpen the faculties of our exhibitors. We can only hope that the prizes will be well contested and fairly won, and that the liberality of the Company will meet with a hearty response.

SHRUBLAND PARK, IPSWICH, SUFFOLK,

THE SEAT OF SIR WILLIAM MIDDLETON, BART.

THE flower-gardens at this place have of late years acquired great celebrity, and the alterations recently in progress being now completed, we have great pleasure in presenting our readers with a short descriptive notice of them, for which we have the permission of Sir William Middleton.

The mansion and gardens are so intimately blended together, both from situation and design, that our sketch of the grounds would be imperfect did we not devote a few lines to describe the mansion, as each affords evidence of great taste in design (and execution also); and we should not be doing justice to the liberal proprietor of Shrubland and his estimable lady, if we omitted informing our readers that Shrubland is the work of their own creation—the designs for the gardens and parterres, we understand, as well as the main features of the mansion, having been laid down by themselves. A residence for a considerable period in Italy appears to have embued both Sir William and Lady Middleton with the spirit of the great Italian masters in architecture and gardening, which they so well knew how to combine. And they have thus been enabled to carry out at Shrubland the purest designs of the Italian school, as exhibited in the *palaces* and *villas* near Rome. True, we cannot assimilate our climate and scenery to that of the south of Europe; but, notwithstanding, Sir William has been wonderfully successful, and without question has formed a very perfect copy of Italian gardening; and, taking into consideration the great superiority of English gardens, as regards floral embellishment, Shrubland must far outvie the best gardens of Italy, though we must yield in comparison to her glorious climate—her groves of Orange, Myrtle, and Bay, and the classic associations of her Villas.

First, then, the mansion is situated on the brow of an eminence, which rises abruptly from the general level of the country to the west, which is overlooked by the commanding position on which the house stands. Within these few years great alterations and additions have been made to the exterior of the house, under the direction and from the designs of that eminent architect, Sir Charles Barry. From the south wing rises a lofty campanyle tower: the view from the upper story of this comprises a wide extent of country, and affords a bird's-eye view of the magnificent gardens below; we may also add, that the entire designs of the upper and lower terraces, and adjoining grounds, are seen to best advantage from this elevated position.

The situation of the house and ground immediately in front was extremely well adapted for displaying the Italian style of gardening. As before noticed, the ground on which the mansion stands shelves rapidly to the west, and forms naturally a steep woody bank: advantage has been taken of this position to form two grand terrace gardens—the lower one being some seventy or eighty feet below the upper one, with which it is connected by a noble flight of stone steps, leading from a pavilion which forms a centre of the balustrade, the boundary of the upper terrace, and directly opposite the centre of the mansion.

We omitted to name that, connected with the house, on the west front, is a plant conservatory, which is kept constantly gay with plants in bloom, and which can be thrown open to the morning gallery. The balcony garden, as we have before stated, is directly in front of the house, and is divided in two by a centre walk leading to the pavilion, through which a fine view is obtained of the country beyond, and likewise of a loggia, at the extremity of the lower garden.

To describe any of these gardens without referring to a plan, is almost a hopeless task. The principal feature in the design of the balcony garden is a group of four large beds on each side the centre walk. These have raised stone borders, wide and massive; next a band of turf; and between the turf and box edging inside a band of white sand. This gives a high architectural finish to the garden, and is, besides, quite in keeping with the walls, balustrading, vases, and other architectural accessories which surround it.

The great object in this garden is to have large masses of colours; hence it was imperative that the beds should be large, to produce a grand effect, and rich warm colours are only employed for the like purpose—four of these beds are scarlet, two purple, and two blue. The scarlet beds are planted in this way:—In the centre, Shrubland Scarlet Geraniums; next, a band of Punch Geraniums; then a band of Mangles' Variegated, followed by Tom Thumb; the edging to finish being a band of "Harkaway," a very dwarf scarlet Geranium. When in full bloom, nothing can exceed the richness of these groups, as regards arrangement of colour.

The two purple beds have for centres a mass of "Prince's Feather;" surrounding this, "Love-lies-bleeding;" next, Geranium Purple Unique; followed by a band of Golden Chain, and finished off by an edging of the Baron Hugel or Princess Royal Geranium, with a well-defined horse-shoe leaf, from which the flowers are taken off, that they may not interfere with the colour of the bed.

The two blue beds are planted with a centre of Salvia patens, mixed with the Blue Chinese Delphinium (Larkspur); next a band of the African Lily (Agapanthus); then a band of Lobelia racemosoides; next, Golden-chain Geranium, finishing with an edging of Baron Hugel, as for the purple beds, the scarlet flowers also taken off.

Two long square turf plots flank each side of these beds, forming altogether a balcony garden. These have a tracery pattern in white sand with stone tripods, and in the centre a fine plant of Libocedrus chilensis, planted by H. R. H. Prince Albert, when he visited Sir William and Lady Middleton in 1851.

The eight beds described above are connected by a stone pattern and three circular beds. The centre one is planted with Hydrangeas, and the one on each side with Yuccas. There are stone boxes planted with Humeas, and the same on each side the centre walk, planted with Portugal Laurel, in imitation of Orange trees, for which they are excellent substitutes. The borders under the retaining wall at the top nearest the house, which supports the terrace walk, is planted with Hollyhocks in lines, fronted with Lady Middleton Geraniums, a rosy coloured scarlet raised here by Mr. Beaton, and very valuable for bedding purposes.

Before leaving this part we must not forget to mention two beds of yellow Calceolarias, which fill up a vacant space to the right and left, at the top of the garden; these have a good effect, and contrast well with the warm-coloured beds in the centre. To the left, leading towards the entrance gate from the park, is a long border under the conservatory terrace, formed into the "chain pattern." The oval centre beds are filled with Cerise Unique and Commander-in-chief Geraniums, alternately; the bands are yellow Heartsease and blue Lobelia, with the space intervening between the beds and the parallel lines of the border filled in with white sand.

On leaving the balcony garden, and descending by the steps to the panel garden (a lower terrace), the view is very striking, with the loggia directly in front, in the boundary line within which is a large open space, filled with beds, vases, and statues. Towards the bottom the steps branch off right and left, forming a circular sweep, the area of which is filled with a fountain in a large stone basin, with a circular walk leading from the steps round it. A wide central walk starts from this direct to the loggia, and four grass terraces diverge to the right and left, having the fountain as a common centre. Passing through the loggia, a deep dell separates the highly dressed grounds from those beyond. This part has only very recently been added; and crossing the dell by a rustic bridge, we find ourselves among great masses of shrubs (selected chiefly for their foliage), herbaceous and common wild plants —everything, in fact, which conveys the idea of wild and natural scenery. Looking from the upper pavilion—or, indeed, any part of the higher grounds—these masses of shrubs are completely under the eye, and it was important that they should by contrast set off the floral embellishment within the boundary, as well as form a back-ground for the panel gardens and other part of the grounds on a line with them; and we doubt not, as they grow up, they will produce the desired effect.

We must, however, retrace our steps to the panel garden, to notice the long green glade or drive which passes through it, having the fountain in its centre. This green walk is nearly a mile in length, and terminates at one end with a flight of steps and balustrade to a platform from which diverge walks and drives in the woods. From this eminence there is a fine vista of its entire length, passing through the lower ground, and ending near the Swiss cottage at the other extremity of the grounds. This drive is margined by parallel beds of Savin, Irish Yews, Arbor-vitæ, vases raised from the ground, filled with choice Geraniums, &c. To the right of the panel garden is the French garden, enclosed within a Laurel *wall*, in which, set in niches cut out of the *wall*, are a number of marble busts, four feet high. This garden is laid down on gravel with Box edgings, and is planted with dwarf flowering plants, as Lobelias, Brachycomes, Cupheas, Golden-chain Geraniums, &c.

Proceeding southward from the panel garden by the long walk, we reach the fountain garden, which lies to the right. This is nearly circular in shape, and has a fountain in its centre, from which four walks radiate, throwing the garden into four divisions. There are, besides, a boundary wall and a conservative wall, taking the sweep of

the garden to the west. This wall is built hollow, and is heated by hot-water pipes; the west side is covered with greenhouse and half-hardy climbing plants, which have the protection of glass during winter; the plants grow with great luxuriance, and bloom profusely in the summer months, when the glass is removed. On the garden side plants of a more hardy nature, including Roses, &c., are planted; and the border at the base contains many interesting half-hardy plants.

The four divisions of the fountain garden are each planted in six colours, with white to begin and finish with. Each division has its separate plants, but the colour and height of each are the same. Commencing with the centre it is white, which is continued all round through the four divisions; next purple, yellow, scarlet, blue, pink; and lastly, white again, at the outside. This arrangement takes up a vast number and variety of plants, as the height and habit have to be studied, as well as the colour of each; but the arrangement, when well done, is unique and very pleasing.

Beyond the fountain garden are some beds on gravel, with raised stone edgings, and planted with mixed colours; amongst others, the shot-silk bed our esteemed friend Mr. Beaton speaks so much of, is very conspicuous: its composition—variegated-leaved Geraniums, mixed with Verbena venosa, or any light-purple variety—is now well known.

Below these beds is the Rosery, which contains a very choice collection of summer Roses. The climbing varieties are trained to a fancy iron trellis, which forms bowers over the walks. A circular bed in the centre is in the form of the heraldic York and Lancaster Rose, with red and white Roses and a yellow centre bed.

Towards the southern extremity of the grounds is an exceedingly characteristic Swiss cottage, with the accompaniments faithfully carried out. It contains a museum of curiosities collected by Sir William Middleton, and among other things, some interesting relics of Napoleon the First, the Duke of Wellington, Lord Nelson, &c.

At a short distance from the Swiss cottage is the Verbena garden, in which are planted those kinds not used in other arrangements. By this garden is the Box terrace, forming a beautiful scroll pattern laid down on a smooth surface of fine sand of a reddish tint, completely in the parterre style of the French. The interior is planted with very dwarf flowers—as Silene Schafti, dwarf French Marygold, Lobelia ramosa, &c.

The whole of the retaining and dividing wall is surmounted with rich balustrading, in the same style as the mansion, pavilion, and loggia, all of which are from the designs of Sir C. Barry. Hence, there is a harmony and unison between the several parts rarely met with, which does credit to the admirable taste and judgment of Sir William Middleton. In addition to the Italian features of the entire place, a great number of busts, vases, and statues are disposed throughout the grounds in appropriate positions. These greatly assist in forming the peculiar tone of Italian scenery so characteristic of Shrubland.

Mr. Foggo, the present head-gardener, informs us that 80,000 plants of Geraniums, Verbenas, Petunias, Lobelias, &c., &c., are annually required for turning out into the numerous beds, borders, vases, &c.,

and this independently of annuals, &c., raised from seed, which are likewise worked into the general arrangement. To procure annually such a large number of plants, and to arrange each to the several compartments for flowering, requires a large amount of care and forethought. Both Sir William and Lady Middleton are deeply interested in all that is going on, and provide liberal help to keep the whole in the highest order of neatness; and to keep up so large and brilliant a display of bloom throughout the season, large reserves are always ready to fill up vacancies and maintain uninterrupted the display. We purpose noticing the kitchen-garden, forcing, and extensive plant-growing departments, hereafter, as well as the grand Spanish Chesnuts on the Brownlow terrace.

To be appreciated, Shrubland should be seen in its summer glory—say between June and October. The *coup d'œil* from the steeps leading from the upper temple, which overlooks the panel garden, eighty feet below, with its fountains, statuary, parterres, and exquisite loggia, or open temple, at the further side, in the foreground, and a wide stretch of country beyond, has few equals.

Mr. Beaton, so well known to the horticultural world, was for many years gardener here, and many of the Geraniums, &c., employed were raised here by him. He was followed by Mr. Davidson, who superintended the principal improvements noticed.

Mr. Foggo, who succeeded Mr. Davidson eighteen months back, is very successful in meeting the requirements of so large an undertaking, and will maintain the high character Shrubland for many years has enjoyed, as one of the finest and best kept places in the country.

BEDDING ROSES.

THIS family is not made the most of in the generality of gardens. We have seen splendid beds of the following:—Géant de Batailles, dwarfs, with Aimée Vibert (Noisette), planted between and pegged down over the surface in the autumn; when the surface was covered with the glossy foliage, and white blooms of the Noisette, out of which grew the Géant with its bloom of glowing crimson, the effect was beyond anything beautiful. We saw the Chinese Madame Fabvier tried with the white for a bottom, but the effect was not so good. Devoniensis makes a noble bed on dry warm soils, as does Souvenir de Malmaison and Mrs. Bosanquet.

THYRSACANTHUS RUTILANS.

IT has been stated that many of the "continental nurserymen" deem a plant worthy of their attention so long as it is *new*, without regard to its merits as an ornamental plant. This doubtless arises from the fact that newly introduced plants are more sought after, or find a readier sale than those that are more common. I can scarcely imagine, however, that we should accept the censure to its full extent, although doubtless there are many plants sent out to the public which are worse than useless, and in no class is it more evident than with those requiring

a stove temperature. The most valuable, as decorative plants, requiring the protection of a glass structure, are those that are of dwarf compact habit, with elegance and beauty of flower or foliage. These qualities will at all times recommend themselves, whereas plants of an arborescent nature are totally useless in this country, with one or two exceptions; for such plant houses as the large Palm house at Kew, the conservatory at Chatsworth, and one or two others, there is no place to accommodate them: and even for such houses as those there are so many beautiful plants that it is desirable to cultivate, that there is room only for very few of the large growing kinds. Of another section, by far too numerous, are those that are termed of "botanical interest." Now, if an ordinary admirer were to see a collection of those botanical curiosities he would undoubtedly condemn them to be consigned to the rubbish heap, and with great justice; for however interesting they may be in a botanical point of view, they are not what are required for filling up our plant houses.

That we possess a great number of plants that can scarcely be surpassed in beauty and adaptability is evident to those who have been accustomed to visit the metropolitan exhibitions; but on the other hand, if we glance over a list of plants that have been introduced to this country during the last two or three years, we shall see the names of many that are worthy of every attention requisite to bring them to their highest point of perfection, and amongst that number will be found the name which heads this paper.

This Thyrsacanthus was, I believe, brought to this country from Belgium, and will undoubtedly compensate for many disappointments, allowing what has been stated to be true. It is a plant of easy culture, growing freely when treated as the well-known Justicia carnea, which plant it much resembles in habit of growth. In that of flowering, however, it is so totally distinct as to lend quite a new charm to our plant houses. The flowers are produced on pendulous branching stems of from two to three feet in length; the flowers are tubulous, nearly two inches long, and are of a bright scarlet colour, and certainly there are few plants so easy of cultivation possessing such desirable qualities, for with it are combined brilliancy and an elegance which can scarcely be surpassed. It is also in possession of another quality that will recommend it to many—that of flowering during the winter months; for however much the exhibitors at our summer flower shows may regret this quality, to the many it will enhance its value. For the last few years there has been a great love of plants trained as standards, and this "rage" has led many to train plants as such without regard to their natural habits, or at least one would suppose such to be the case, as there is not much in the habit of an Azalea or a Geranium to point to that system of training; and if such plants *do* look well it arises from the fact that they cannot do otherwise when in good health and full of bloom. With the Thyrsacanthus, however, it is quite different, for undoubtedly that is the most natural, consequently the best, and it would look quite as unsightly if dwarfed by too frequent stopping, as some do when mounted on a naked stem of three feet in height.

J. SHUTER.

CALENDAR OF OPERATIONS FOR MAY.

Auriculas.—The cooler the situation the plants are placed in at the present time, the longer they remain in flower. As soon as the blooms begin fading, remove the plants to a more exposed yet cool situation; a raised bed is best suited to stand them on, with lights placed over them during wet weather. Give the plants a good fumigating before they are taken from the pits or frames to be stood out of doors.

Azaleas.—Examine carefully for thrips, and if you discover any, fumigate immediately. As soon as the large specimen plants go out of flower, pick off the seed vessels; if any of them require a shift they should have it, as they will be commencing to grow; when potted, keep them rather close for a time and syringe daily. Young plants will require attention in stopping and training of the shoots.

Camellias.—Keep a tolerably high temperature to assist the formation of flower-buds. Give liberal supplies of water, and occasionally some liquid manure; syringe daily.

Carnations and Picotees.—There will be but little to do for the next three weeks with these plants, excepting watering in dry weather. Choose a mild day for this. Towards the end of the month, stake them permanently. Keep the plants trimmed of all dead foliage, and clear of aphides.

Cinerarias.—Procure seed from the finest kinds, a little of which should be sown as soon as ready, and the plants will bloom about Christmas next, giving plenty of bloom at a time when flowers are scarce. As soon as the named kinds are past their best, stand them out on a shady border to produce cuttings, which should be taken off in a young state, and struck in sand in a cool situation.

Cold Frames.—Leave air all night when plants are hardening off; and in very mild weather the lights may be left quite off all night. Pot off spring-struck cuttings, also seedlings of all kinds; propagate all desirable plants.

Conservatory and Show-house.—Attend to the regulating and training of climbers. Keep a watchful eye for insects, which are generally troublesome at this season, if once allowed to get ahead. Remove all plants as soon as the flowers begin to die away. Examine the soil around all plants in beds, and see they do not suffer for want of water. Syringe plants not in flower. Give abundance of air, and water freely. In fine weather, towards the end of the month, leave some air in all night.

Cucumbers.—Regulate the growth of the plants, and never let the shoots become crowded. Water freely, and do not let the plants carry too many fruit at one time. Prune back plants that have been in bearing for some time; and when they make a fresh growth regulate the shoots, but do not stop them too freely. Keep a watchful eye to insects, particularly red spider, which, if not kept down, will soon overrun old plants. Keep a steady bottom heat and a moist atmosphere. When grown in pits and frames, attend to the linings, and renew them when the heat declines.

Dahlias.—Re-potting and growing on the young plants in cold

frames is of more importance than early planting. Planting may be commenced towards the end of the month. We do not plant ourselves before the first week in June. See that the points of the young plants are not infested with green-fly when planting time arrives. Fumigate before they leave the pits, if this troublesome insect is visible, as it will not be easy to get them under after the plants are in the ground. Seedlings will require considerable care, watering, &c., the first few weeks after being planted.

Flower Garden.—This is a busy month here. We presume the arrangement has long since been determined on; if so, and the weather be favourable, you may begin to "bed out" after the middle of the month, planting first, of course, such things as have been well hardened off, and the more tender plants towards the end of the month; a nice showery day after all are planted would save a deal of trouble; if the weather sets in dry you will be obliged to water. Propagate by slips double Wallflowers, and divide the roots of Violets and similar plants. Roll and mow the Grass weekly; roll the walks frequently, and keep every place neat and tidy.

Forcing Ground.—Plant about the middle of the month ridge Cucumbers and Vegetable Marrows under glasses, on a bed of fermenting materials. We generally plant ours in turf pits where we grow early Potatoes. As soon as the Potatoes are taken up in May we plant the Cucumber, and on the same bed, placing glasses over them. But the following plan answers equally well: Take out the soil in any open situation about one foot deep, four or five feet wide, and as long as may be required. Fill this trench with the fermenting materials, and raise the bed twelve or eighteen inches above the soil; on this place the earth that was taken out of the trench, always putting about a barrowful of fresh soil under each glass for the young plants to strike root into. If the weather be bright and sunny, the plants will require shading for a few days, and air must be admitted freely on fine days.

Fruit (Hardy).—Apricots are with us, this season, a most extraordinary crop; they have set in clusters of ten, fifteen, and twenty in a cluster. Thinning is indispensable, and it must be done with no sparing hand. The young leaves of Apricot trees are often devoured by little caterpillars; their presence is plainly indicated by the curling up of the leaves; the only way to get rid of them, and to save the trees from serious injury (for they make sad havoc when not looked after), is to unfold the leaves and kill them. This is rather tedious work; but as it is the only effectual way of getting rid of the caterpillars, and as the present and future well-being of the trees is by this means secured, the labour is well bestowed. Peaches and Nectarines appear to be setting pretty well: the trees will require disbudding, but do not remove too many at one time, but go over the trees often. In disbudding Peach and Nectarine trees, the general rule is to divest the bearing wood of the present year of all shoots except the terminal one and those issuing near the bases; when there is no fruit, the buds should be rubbed clean off; but when there is fruit at the base of the buds, instead of rubbing the buds clean off, merely pinch off the point between your finger and thumb nail, leaving two or three of the leaves

nearest the base. Keep a watchful eye to aphis; as soon as you perceive any, give the trees a syringing of weak tobacco water, which will soon stop them.

Greenhouse (hard-wooded).—Shade plants in flower; give abundance of air, and leave some on all night. Many of the young plants potted early in the season will now be beginning to grow freely; they will require attention as to stopping of the shoots, training, &c.; they will also want liberal supplies of water—do not let them get too dry, and do not saturate them. Pick off seed-vessels from all plants as soon as they go out of flower. Shift such plants as require it; stop back and regulate the shoots. *Soft-wooded Plants.*—If not already done, the specimen plants of all kinds should be shifted into the pots they are intended to flower in, and they should not be stopped very much after this.

Hollyhocks.—Late struck plants may now be planted to bloom with the Dahlias in September; watering and staking are all that is required to be done during the present month.

Kitchen Garden.—Keep the hoe always going when the state of the soil permits; hoe deeply and frequently among crops, weeds or no weeds. Thin young growing crops—as Carrots, Parsnips, Turnips, Beet, Onions, Parsley, &c. Dung and dig deeply ground as it becomes vacant, for the winter crop of Greens, Broccoli, Brussels Sprouts, &c. In the early part of the month, go daily over the early Potatoes, and draw some dry soil over such as are above ground; this will save them from frosts, if any should occur; towards the end of the month the early crops of Potatoes will require regular soiling up. Sow Scarlet Runners; sow successional crop of Peas and Broad Beans; sow also French Beans. Sow also for succession, Cauliflowers, Lettuces, Turnips, Radishes, Spinach, &c. Transplant from seed-bed the strongest plants of Lettuces and Cauliflowers. Plant against a wall, or other warm situation, Tomatoes and Capsicums; plant sweet Marjoram and Basil on a warm border; plant Celery in trenches well filled with good manure, and plant Leeks in a somewhat similar manner. Rod Peas and Scarlet Runners. Water freely in dry weather. Give the Strawberry plants two or three good soakings of water. Cut Box edging and bring up all arrear of work.

Melons.—See the directions in last month's Calendar.

Orchard House.—Water freely and occasionally with liquid manure. Give air freely in fine weather. Thin the fruit, and go over the trees frequently to disbud and stop shoots. When fruit is set, syringe freely. Keep down insects.

Pansies.—Water the beds freely, to prolong the blooms in good character. Those in pots should now be stood in a cool situation, sheltering the plants in bad weather only, on all other occasions keep them quite open. Cuttings strike readily if put in now; the small side shoots should be chosen for this purpose.

Peach-forcing.—See our directions in previous Calendars.

Pelargoniums.—The directions given last month will apply to the plants generally. The early or May plants will now require shading during the brightest part of the day, as the bloom expands. Bees

must be carefully excluded from the house; muslin or thin garden netting may be used for this purpose at the openings. This, with careful and judicious shading and watering, prolong the bloom to a considerable time. No plant in fact lasts longer in flower than the Pelargonium if "well done."

Pinery.—Attend carefully to the bottom heat, and see it does not fluctuate. Plants in fruit will now require liberal supplies of water, and occasionally some liquid manure. Give air according to the state of the weather; always close up early in the afternoon, and syringe well all fruit done flowering overhead; sprinkle paths well with water; keep up a moist atmosphere. The young plants will now be beginning to grow freely, and will require more air and water. Syringe daily. Towards the end of the month many of them, if not all, will require shifting; and at this season of the year strong well-rooted plants should have a liberal shift.

Pinks.—If dry weather continues, water freely, using weak liquid manure about twice a week. The shoots should be thinned if large flowers are required for exhibition, leaving a good number to bloom on such kinds as Great Britain, Narboro Buck, Duke of Devonshire, and other full kinds. Thin flowers, such as Criterion and Lola Montes, should not be allowed to carry more than two blooms.

Pleasure Grounds.—Roll and mow the Grass every ten days or a fortnight; clean and roll walks. Attend to newly-planted trees and shrubs. If very bright weather prevails, valuable specimens recently planted should be shaded, to check evaporation; they should also be well watered, and should be syringed night and morning until they are considered safe.

Roses.—In reply to inquiries as to the reason of our advocating late pruning, or rather shortening the branches, it is principally to guard as much as possible against the destruction by weather or accident of the *outer* bud, to which we have so frequently directed the shoots to be cut back. The green-fly and rose-maggot will soon commence their destructive work, and we again urge, as we have in former Calendars, to attack the enemy ere they have time to entrench themselves, or they will sap most effectually all hopes of an early bloom. Buds that are pushing in a direction that will interfere with the shape of the plants, or are growing too thickly in the centre, should be removed.

Stove.—Shift all growing plants that stand in need of it. Tie out and stop plants intended for specimens. Water freely and syringe daily. Give air plentifully in fine weather, but guard against dry cutting winds. Use every means to keep down insects, and attend to the training of climbers.

Strawberries.—If the early-forced plants, instead of being thrown away, are planted in a south border, and well watered for a time, they will produce a good crop in September next.

Tulips.—On a mild day water between the plants, so as not to wet the foliage; the morning is the best time. Shade with care, to protect the expanding bloom without drawing the plants.

Cinerarias.

1. Brilliant (Lidgard)
2. Earl Clarendon 'Turner'
3. Emperor of the French 'Turner'

Jas Andrews Delt & Lithco

Printed by C Chabot

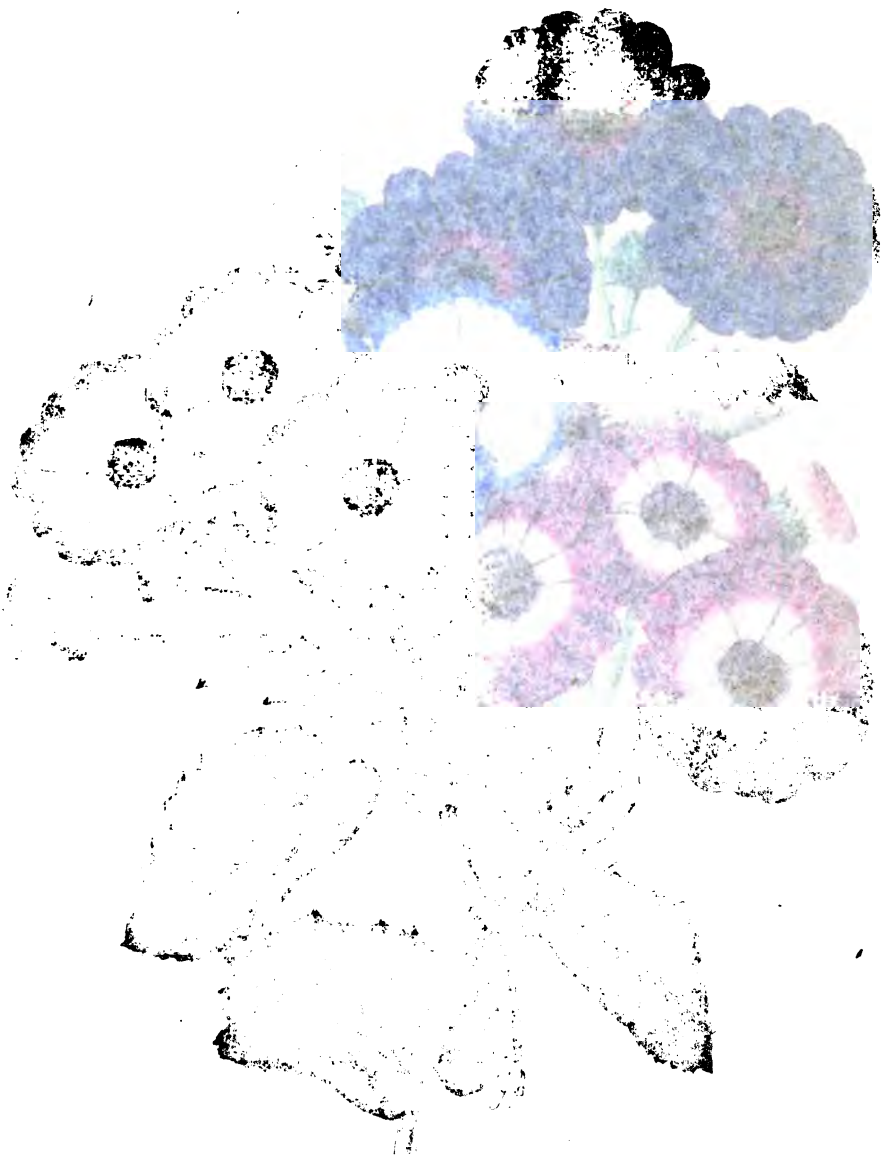
CINERARIA.

(Pericallis.)

this month. Much our
the show
needless, an essential
special plant for
though it may be said
more care and
large pots
its place it is
be selected and
early stage
If
pot
loam and
As soon as the roots reach the
time, they should be repotted
use for a few days—spring
for any poor in the
soil. As soon as
they should be stopped
stem laterals. Once stopping is
operation produces
for
little and growing
few weeks
January. Every
pot-bound in the
flowering state
plants grow
and vigorous parts of
hold, with much
grow the
small shoots,
which is a great pest among Cinerarias,
removed by spraying sulphur to the
is also necessary to prevent the
they should be
as
near the glass as
and compact plants.

As specimens
a few examples of the
that those chosen should

it is necessary to select
, bearing in mind
fine form, clear colours



Cineraria

CINERARIAS.

(PLATE 114.)

WE this month furnish our readers with a plate of Cinerarias. Within the last few years this flower has become, and most deservedly so, an especial favourite, whether we view it as an ornamental plant for the conservatory, or for exhibition; and although it may be said to thrive and flower in almost any soil, a little more care and attention are necessary to bring it to a state approaching perfection, and for this care it will repay the cultivator. In the first place it is absolutely necessary that strong cuttings should be selected and inserted in a light sandy compost, and placed in a shady situation, in a cold frame, until rooted, which, under favourable circumstances, will be in a few days. As soon as rooted pot off into 60-sized pots, in a compost prepared of fibrous loam and leaf-mould, with a good admixture of silver sand. As soon as the roots reach the outside of the pot, which will be in a short time, they should be repotted into larger pots, and kept close for a few days—sprinkling them overhead, and throwing them open for an hour in the morning and evening, will be found very beneficial. As soon as they attain the height of about three inches they should be stopped, which causes them to break into strong laterals. Once stopping is all that is necessary, as the second operation produces weak growth. When first-rate plants are wanted for exhibition, care will be required to keep them in a healthy and growing condition, to which end they should be shifted every few weeks until they receive their final potting, which should be about January. Every care should be taken that they do not get pot-bound in the small pots, as that will throw them in a blooming state immediately. The compost we would recommend for larger plants generally, is two parts of good turfy loam, and equal parts of good well-decomposed cow-dung and leaf-mould, with an admixture of silver or river sand. As the plants grow take care to thin out all the superfluous leaves and all small shoots, so as to admit air freely and prevent mildew, which is a great pest among Cinerarias, and which can only be removed by applying sulphur to the parts affected. Fumigating is highly necessary, to prevent the green-fly. As the plants grow they should be pegged down or tied out, so as to keep them as open as possible. It is indispensable that they should be kept as near the glass as possible, which is the only way to insure dwarf and compact plants.

As seedlings make fine ornamental plants, it is necessary to select a few examples of the most esteemed kinds, bearing in mind that those chosen should be of the best possible form, clear colours

and marking, as much depends on this in producing new and first-rate varieties. As soon as the seeds are ripe they should be sown immediately in some shady place; and, as soon as large enough, prick off thinly into flat pots or pans, and keep close for a few days until thoroughly established. They may be stopped and treated in all ways similar to those struck from cuttings.

After flowering, the old plants should be partially cut down (as cutting them down close is very injurious, and in many instances rots the crown), and placed in a north situation—and protected, should a continuance of rain prevail. Water moderately through the winter months, and as spring advances and the plants get stronger, weak liquid manure may be given. For the guidance of the amateur and those interested in the culture of this charming plant, we append a list of the best and most useful varieties yet sent out.

Admiral Dundas (Henderson), white, with bluish purple margin and dark disc; good show flower.
Admiral Dundas (Ivery), rich crimson purple, with white centre and dark disc; good habit.
Brilliant (Lidgard), white with an azure blue edge, blue disc and fine form.
Emperor of the French (Turner), a bright rosy crimson with white ring and dark disc; fine show plant.
Earl of Clarendon (Turner), violet purple with red centre—of good form; a first-rate show flower.
Fascination (Henderson), light blue with light circle—good form.
Lord Stamford (Henderson), white with light blue edge, light disc, and very free.
Lady Paxton (Turner), white with a broad margin of purple—dark disc; large and showy.
Lady Camoys (Sutton), pure white with deep blue edge and disc; dwarf habit.
Lablache (Henderson).
Mrs. Sidney Herbert (Henderson), white, with rosy carmine edge and pure disc; fine habit.
Monarch (Turner), rich purple with fiery centre; dwarf and distinct.
Optima (Bousie), white with deep blue edge and disc; a good show plant.
Optima (Hopwood), white with a broad crimson edge; good form and dwarf habit.
Octavien (Ker), white with rosy purple edge; good.
Prince Arthur, scarlet crimson; good form and substance.
Prince of Prussia, bright azure blue with light centre.
Picturata (Henderson), rosy violet with light centre and disc; a good show flower.
Scottish Chieftain (Sievewright), white, with deep violet edge and dark disc; dwarf.
Sir Charles Napier (Turner), an intense blue self—of good form; good show flower.

AQUILEGIAS.—A pretty hybrid has lately been raised in the gardens at Chiswick between A. fragrans and A. californica. It is exactly intermediate between the two parents, and is a plant of great beauty.

LIGHT:—ITS INFLUENCE ON VEGETATION.

(Continued from page 112.*)*

THE great desideratum in plant growing is to have a symmetrical growth, green healthy foliage, and short-jointed wood, which, at the proper season, should be well furnished with bloom. As this last condition is the admitted criterion of excellence for exhibition plants, it follows that a too luxuriant state of growth must not be encouraged beyond a certain limit, as this would interfere with the full development of bloom, the great object to attain in growing plants for display. I need hardly remind your readers, that to know exactly how to regulate or control the growth of plants, so as to check further growth and direct the energies of the plant towards the maturation of the wood, or to induce that state of repose necessary to enable it to form the requisite secretions for organising flower-buds, is one of the great triumphs of the gardener's art, and only to be obtained by a practical acquaintance with the peculiar habits of each race of plants; the *agent* by which he effects his purpose is light, in connexion with heat, due regard being paid at the same time to the state of the roots.

Supposing then a collection of ordinary hard-wooded greenhouse plants are being started into growth in the spring, it should be the main object of the manager to see that every plant is exposed to as much light as can be made to reach it. This premises that the plants should be as near the glass as possible, and sufficiently wide apart to allow the light to fall on every part of the plants, as well as for the air to circulate freely between them. As each shoot advances, it will be acted upon by the agency we are considering, and as each leaf is formed it will be enabled to perform its allotted functions in the plant's economy: there will be no *drawing*, because each leaf, having the full exercise of its powers, will therefore be enabled to build up and make strong the young growth; and as the general health of the plant will depend on the healthy action of the leaves, we shall in time have plants possessing all the properties which constitute their value as specimens, and which we have pointed out at the commencement of this article, attention having in the meantime been paid to supplying their roots with the necessary elements for their growth. But as the time will arrive when further growth should be gradually arrested, and when subjected to a drier atmosphere a more complete exposure to light will be necessary, to perfect the growth already made and allow time for the due formation of the embryo flower-buds.

In stating that plants are benefited—and, indeed, can only be grown in perfection—when every leaf is brought under the influence of light, I by no means wish it to be understood that in all cases full exposure to the sun under glass should be permitted, being fully aware that, under glass, the plants we are considering would suffer, not perhaps from free exposure to light alone, if attended with complete ventilation, but to the heating rays of the sun, which are injurious to many plants when under glass, although not so when fully exposed out of doors. Shading,

therefore, will have to be adopted, to prevent that brown, rusty tinge of foliage which this class of plants get by being exposed to the sun's rays.

Although, generally speaking, most hard-wooded plants will perfect their growth and form flower-buds ("set for bloom"), if kept under glass throughout the year, yet I am convinced that placing them out of doors, during the latter part of the summer, very much assists the process and is beneficial to the plants. But while advocating their free exposure to sun and air while out of doors, they should be protected from rain, and the sun should on no account be permitted to shine on the pots, as this is frequently the cause of much mischief to the plants by its extracting the moisture from the ball of earth, and perhaps entailing death on the plant itself.

I was forcibly reminded of the effect produced on shy-blooming plants, by setting them out of doors during summer, some years ago, when I had under my care a very large plant of Erica depressa, which had been treated as an ordinary greenhouse plant, and kept in the house throughout the year. Having to repair the house, I placed all the plants on a gravel walk in front. This was in July, and they remained there till the end of September. My depressa had only bloomed very sparingly before, but in the following spring I was much gratified by seeing one mass of bloom; the surprise died away with the decay of its bloom, and the plant, as formerly, remained all the autumn in-doors. The following spring there were no blooms; but ever since, this and some other shy-blooming varieties have been accommodated with a seat out of doors the last months of summer, and each spring since have bloomed in the greatest perfection. I may add, the plants were completely exposed to the sun, care being taken of their roots and preserving them from rain.

Respecting the kind of houses for growing plants, I am of opinion that, for purposes of *culture only*, our houses are by no means what they should be. To grow a plant is one thing, and to display a plant in bloom is another; and it by no means follows that what is good for one is so for the other. We think that where very high cultivation is carried on, structures must be erected for the special purposes of culture, and I am pretty certain that we shall find that a series of low light pits or houses will be devoted solely for growing and bringing plants up to the blooming period, when other structures which may have more architectural pretensions, and may be expressly adapted for displaying plants when in bloom, will be in general use. How often do we see a well-finished span-roofed house, half full of plants in flower, requiring a dry cool atmosphere, and close shading from the sun, conditions necessary to preserve the plants in flower, as fresh and as long as possible, while the remainder of the plants probably required exposure, and a course of treatment the reverse they were subject to, owing to its not suiting their neighbours.

(*To be continued.*)

DELPHINIUM CARDINALE.—It is a hardy perennial, and is represented in coloured plates to be a bright scarlet.

STUDY OF NATURAL HISTORY.

RECENTLY you did me the honour of inserting a letter of mine, and you encourage me to pursue my endeavour to win the attention of your readers to the subject of Natural History.

In a charming volume* which Her Majesty has caused to be published, and copies of which have been presented by H.R.H. Prince Albert to nearly all the public institutions in the United Kingdom, I find the following impressive remark:—

"Our object in examining the stone, the rock, the lichen, the moss, the flower, the fruit, the insect, the bird, or the quadruped, is to exercise our faculties by learning how beautifully, and with what wisdom all things have been constructed, how wonderfully they are formed with relation to each other, and how manifestly they display a power of which we could form no conception were we not to attend to its working as exhibited by them. It is true, we cannot fully comprehend the complicated relations of the most common objects, much less understand the ordination of the universe, or even of our own world; but we labour in hope, we are studying—some of us, no doubt, very imperfectly, others, more profoundly—the works of the Deity, and the more progress we make, the more we glorify Him by an intelligent, not a vague admiration.

"There are some who aim at the knowledge of general laws, more who seek simple facts. Both parties will find enough to engage their faculties, and neither will do the work of the other efficiently. There is no reason why one should despise the other; contempt of anything but vice indicates an unsound mind, a defective judgment, an ignorance of the relations which men have to each other and to their Creator, an undue self-estimation, and a contempt of the rights of other men. He who measures the orbit of a comet has not, therefore, higher faculties than he who examines the cytoblast of a fungus, and there is far more to be seen by us in a beetle than in a planet—upon that granite mountain opposite, at the distance of nine or ten miles, than in the sun, the moon, and the stars."

Words feeble as mine are may not be added to the above eloquent passage until next month; therefore I conclude, and will then endeavour to stimulate the industry of your readers in the acquisition of knowledge which will be to them a never-failing source of innocent gratification.

C. E.

Bath.

SONERILA MARGARATACEA.

THIS is unquestionably one of the most handsome variegated plants in cultivation; for, although its prettily marked foliage may not be so striking or beautiful as that of some of the Anæctochiluses, Marantas, &c.; the beauty of these is confined to their foliage, while this is one of the freest blooming stove plants which we possess, and it would certainly be diffi-

* "The Natural History of Dee-side and Braemar." By the late William Macgillivray, M.D. Printed for private circulation.

cult to name a more attractive plant than a moderate sized specimen of the Sonerila, when well covered with bloom. It is also much more accommodating in its habits than some of our variegated plants, being of easy culture, and readily increased to any desirable extent; and for amateurs and persons having but small accommodation for stove plants, it is a real gem. It would appear, however, that there are two varieties of this plant in cultivation, the one having the markings on the foliage much larger and clearer than the other; and persons having yet to purchase will do well to make sure that they procure this variety, which is very much handsomer than the variety with the smaller spots. But, as it is stated in your remarks accompanying your plate of this plant,—and this, doubtless, on the authority of Mr. Veitch,—that it may be propagated from seed, it is probable that the plants which the Messrs. Veitch supplied had been obtained in that manner. Be this as it may, however, your representation is either unworthy of Mr. Andrews, or the variety represented there is greatly inferior to one in cultivation; hence those who, like myself, may not have been fortunate enough to obtain the best variety have no cause to find fault with the Messrs. Veitch, for having served some of their customers better than they had engaged to do. But either variety is well worthy a place in every collection, for the foliage of the worst is very pretty; and when the plant is covered with its trusses of rose and yellow coloured flowers, it would be difficult to name a more attractive subject for decorative purposes; and then it blooms at a season when attention is not diverted from it by the presence of such showy plants in bloom as Echiteses, Dipladenias, &c., and it also remains long in beauty.

Fortunately this charmingly pretty subject appears to be as easily managed as it is beautiful; but it is more than probable that, with our present limited experience, we may not have hit upon the best treatment for it. I will, therefore, only profess to state the treatment I have adopted, and leave your readers to judge for themselves, whether it is the most suitable that could be pursued. My plant, which was a very small bit in a four-inch pot, came to hand about the middle of May last; and as I entertained a very high opinion of it, special care and attention were afforded it from the first. I was afraid, however, to treat it too kindly at first, lest it should damp off; and for two or three weeks it occupied a shady place near the glass on a shelf in the stove. When it had made some little progress, and I had obtained a cutting, it was re-potted, plunged in moss in a ten-inch pot, covered with a large bell glass, aud plunged in a brisk bottom heat. The glass was removed at night for some time, until it was evident that there was no danger of the plant damping off; and then the glass was only raised a little on one side for a night or two after watering. Here it grew rapidly, and towards the middle of July was shifted into a nine-inch pot, plunged in moss again and treated as before. Shortly after this, however, the foliage began to curl and damp at the points; and to prevent this, it was removed to a shady part of the house, the bell glass removed and kept rather dry, which, to a great extent, had the desired effect of checking the evil; and I fancy it will be found that the old leaves are subject to get disfigured, especially if they are allowed to

grow very thickly together. I have, therefore, been careful to keep the shoots nicely distributed, and have regularly removed as many of the old leaves as could be done without causing the plant to look bare; and I think it advisable that the foliage should be rather freely thinned out, if only for the chance of having the leaves left larger and more vigorous than would be the case without thinning; and my plant has certainly been much more handsome since I have practised thinning its foliage. The little specimen bloomed nicely late in autumn, carrying some twenty trusses, which continued in beauty for some six weeks. As soon as the last of the flowers had disappeared, it was placed close to the glass on a shelf in the stove, and very sparingly supplied with water at the root; but, instead of its remaining dormant as I anticipated, it seemed very much inclined to grow, and was in consequence more freely supplied with water at the root than I had intended that it should be during the winter. After blooming, something like a third of the plant was cut out to afford cuttings, but it is as compact again as ever, and is now covered with flowers, having upon it something like thirty trusses. I did not look for it to go on blooming through the winter, and have been looking for signs of exhaustion, fearing that I had been over-driving a willing subject, but no symptom of the kind is perceptible, and I think it all the more valuable for having deceived me this way. And I see no reason to doubt but that with kind treatment the plant will bloom for months in succession during the winter. But it will doubtless be advisable, when the object is to increase the size of the plant, not to let it bloom too freely, and to place it in a sufficiently low temperature to prevent growth for some three months after blooming, and I think it may be wintered safely enough in a temperature of about 50°. For soil I have used rich fibry peat, turfy loam, and leaf soil, in about equal proportions, mixing it liberally with silver sand, and in this the plant seems to do perfectly well. Young plants I have tried in peat and sand, thinking this might improve the colour of the foliage, but without any apparent improvement. Propagation is easily effected by means of cuttings, which root freely enough under ordinary treatment, but shoots for cuttings should be secured off the main stem if possible, as the runners do not seem to make as good plants. As to raising it from seed, my plant has not exhibited any signs of producing any; but if seed can be obtained, there can be no doubt that the plants would be more vigorous than those from cuttings. X. Y.

PROTECTION OF FRUIT TREES.

HAVING perused the very elaborate papers on the protection of wall trees by Mr. Saul, and having had during the last twenty years a tolerably good share of practice in the management of wall trees, my experience compels me to dissent from some of the opinions expressed by your correspondent at Stourton.

Now, it matters not whether we prosecute our investigations in acquiring a knowledge of the laws that govern either the animal or

vegetable kingdom, we shall find that certain causes produce certain effects. Anything that tends to interfere with Nature's performing her systematic action necessarily involves to a certain extent imperfect organisation. If Nature's laws are infringed, her machinery, if I may be allowed the expression, is thrown out of gear, and her perfect action impeded, if not absolutely destroyed.

There is such a word to be found in "Johnson" as *accidental*, and what does that one word imply? why, a whole host of unforeseen events and vexatious disappointments.

We are the creatures of circumstances. Is there no analogy between plants and animals? most assuredly. A man leaves his happy domestic hearth in full vigour in the morning, and in the evening perhaps returns a mutilated mass. A plant may to-day be in most beautiful condition, but alas—the Ice-king and the morrow—and its beauty is faded and gone.

A gardener may be proud of the healthy fruit-promising condition of his trees, but if he does not efficiently protect, his pride, in all probability, will result in mortification. I hope this is not the case with Mr. Saul. At page 106 he states that he hopes to have the pleasure in a few weeks of thinning many quarts of young fruit. Has this been verified? If so, he must have well covered up his trees the last week in March, *i.e.*, if the frost was as intense at Stourton as it was in the neighbourhood of London. I very much question if in this part of the country there will be any occasion to thin the Apricots, having been subjected to eight or nine degrees of frost, unless the trees were well protected. I can scarcely conceive it possible that any one at all conversant with the physiology of plants should presume for a moment that such very tender and succulent organs as the stamens, pistils, and the stigmas, &c., could escape injury if exposed to the biting blast. Is it not of the greatest importance that no obstacle presents itself to prevent the full development and maturation of the flower? As to the paramount importance of this part of nature's work, who so well convinced as the hybridiser, the raiser of new and choice seedlings? We cannot and must not expect successful results except under circumstances purely conditional.

I have had and have seen excellent crops of wall fruit without protection, although the season may have been frosty; and I account for it in this way: the atmosphere was dry, the days clear, no clouds to intercept the warming influence of the sun's rays, the walls, the earth absorbed heat sufficient during the day to keep the Ice-king under subjection during the night, by radiation. Frost is at this season of the year, generally speaking, the most severe, or its intensity more sensibly felt, just before the rising of the sun at dawn of day; this is in my humble opinion on account of the radiating powers of the earth, &c., having become, if I may so speak, exhausted. When fruit trees are blooming, I much prefer two or three degrees of frost, with a fine light atmosphere, to wet; as a wet, dripping season is the worst, decidedly, as regards the fructification of the fruit blossoms.

Trees may be ever so well managed by the most skilful manipulator, they may be in the most robust condition possible, yet for all

that, if seasons are not propitious, artificial means must be had recourse to, or all our efforts as regards a successful issue will prove abortive.

GEO. FRY.

Manor House Gardens, Lee, Kent.

FOLIAGE *versus* FLOWERS.

To contemplate the past history of British gardening, the rapid strides it has made of late years, and the great number of new and beautiful plants introduced, together with the perfect state of cultivation attained, must be a subject of the highest gratification to all lovers of horticulture. It is also pleasing to find so many of our countrymen, when travelling abroad either upon business or pleasure, instinctively turning their attention to the collection of seeds or plants, feeling desirous to add something to the botany of their native lands; and some of these amateur collectors have been fortunate in sending home plants of the highest importance, and all have given a proof of their love of flowers.

But while we have been collecting and improving the class of plants that produce fine flowers, we have to a great extent neglected those that produce fine foliage. Now, if we take into consideration the transitory nature of the flowers and the permanent character of the foliage, we cannot but regret that the latter class is not more extensively cultivated.

In this particular branch of gardening we are far behind our continental neighbours. They appear to consider foliage of the first importance, and many fine plants imported by nurserymen to this country have met with so little favour that the importers have been obliged either to send them to the continent to find a market, or sell them to foreigners for the same destination. But let us hope that this state of things is nearly at an end, and that foliage will soon carry with it as much influence as flowers.

Persons who have seen the magnificent Palm stoves at Chatsworth and Kew would be better able to estimate the real value of beautiful foliaged plants. The noble and varied leaves of the Palms, Cycads, Musas, Agaves, tree and other Ferns, &c., presenting as a whole the most enchanting aspect, and giving us, as the late Dr. Wallich enthusiastically observed, "a perfect miniature of a tropical forest."

The first large house of this kind in England was undoubtedly built by the late Messrs. Loddiges, of Hackney, who attained a world-wide celebrity for their unrivalled collection of these interesting plants, although that collection is now no longer for sale. We are happy to find the nucleus to another has been rapidly formed, and will, we doubt not, if encouragement be given, be as rapidly increased by Mr. Veitch, of the Exotic Nursery, Chelsea, where may be seen some excellent specimens of this class of plants.

We are quite aware that large plant houses, such as those referred to, will never become universal, and that large specimens of Palms, &c., cannot become generally cultivated; still there are many fine foliaged plants which may be introduced into our ordinary stoves and green-

houses, and with the best possible effect; such, for instance, as Browneas, Rhopalas, Ficus, Dracænas, Cycads, tree and other Ferns, &c., for the stove, and Agnostus sinuatus, Stadmannia australis, Dicksonia antarctica, Berberis nepalensis, and others; Dacrydiums, Araucarias, and many other kinds for the greenhouse. Horticultural societies appear to have been fully impressed with the importance of these plants, and are offering liberal prizes for them at the forthcoming exhibitions. Let us hope that it may be the means of bringing them into more general cultivation.

EDGINGS.

WHAT are the best materials for forming edgings with? This is a question which admits of a variety of answers, as several things are used for the purpose. Amongst "dead matter," may be mentioned slates, tiles, bricks, stones, boards, &c.; and amongst plants, Box, Thrift, London Pride, and a dozen other kinds of dwarf-growing things, all of which are capable of being formed into good and neat edgings. Much, however, depends upon locality; for what would answer in one place might be perfectly useless in another: the chief object in view should be to lay down that kind of edging which looks most sightly, or is the most efficient with the least trouble and expense. What I am going to state is, perhaps, neither novel nor rare; but, nevertheless, it may be of practical use to some of your readers. For a kitchen-garden, where there are straight lines, if yellow bricks are laid down with their angular edge uppermost, resembling the roof of a house, they form one of the neatest looking edgings possible. Let the face of the bricks slope inwards towards the path, then lay gravel to within two inches of the upper edge; they should be good smooth bricks, and laid or fitted close and even together, so as, when finished, to form a small angular ridge. They are easily cleaned with a little trouble, form a good permanent edging, and afford no protection to any kind of vermin: round the corners a few rough burrs, if fitted together, prevent its being trodden down, and, if laid uniformly with the bricks, are by no means unsightly, but rather an improvement.

J. H.

TEDWORTH HOUSE, WILTS,

THE RESIDENCE OF THOMAS ASSHETON SMITH, ESQ.

EVERYONE will have heard of Tedworth and its hospitable proprietor, T. A. Smith, Esq., the warm patron of British field-sports, and the no less liberal supporter of gardening. What the stables and kennels of Tedworth are to the sportsman, the giant conservatory and gardens are to the admirers of horticulture. We may add that both are objects of especial interest, and are supported with the utmost liberality by Mr. Smith, who, in every sense of the word, is the model of an English country gentleman.

The domain of Tedworth lies on the extreme verge of Wiltshire, bordering Hants. The road from Devizes passes through the rich corn district of the Pewsey Vale, and next over a more open down country, till, past Everleigh, the woods and coppices of the Tedworth estate become a marked feature, and we find ourselves surrounded by all the indications of a fostering landlord, as shown by the neat and comfortable cottages of the district.

The gardens at Tedworth, which are so widely known, have been for more than twenty years under the charge of our friend Mr. Sandars, a gentleman well known as one of our best and most intelligent gardeners, as everything at Tedworth abundantly testifies, and of which we shall have to speak hereafter.

The mansion is situate in a valley well furnished with timber trees, and surrounded by gentle eminences richly clothed with wood. The views from the house, though not very extensive, are much varied, and comprise some pleasing peeps over the diversified home scenery to the distant downs. The house itself is large, and internally fitted up with every comfort and luxury suitable to the position of its proprietor, and of the distinguished company who, during the *season*, enjoy the sports and princely hospitalities of Tedworth.

In front of the mansion is a large space of ground laid out in a style of mixed gardening, having large masses of the rarer evergreen shrubs and American plants, standard Roses, &c., interspersed with beds solely devoted to flowering plants. Near the house the flower-beds partake of a regular design, and were well filled with the choicest bedding plants; we noticed particularly some large beds filled with the "Crystal Palace Dahlia," a very dwarf scarlet variety raised here by Mr. Sandars, and which is likely to be a very valuable acquisition for bedding out in masses, as it only grows 1½ foot in height, and is profusely covered through the season with bold double flowers of an intense scarlet. The Messrs. Henderson, of the Wellington Nursery, have the stock, the demand for which, we understand, is very great. To fill the beds in this garden, and a smaller flower-garden between the house and the kitchen-garden, in addition to the borders, &c., a large quantity of bedding-out plants are required, which is now being transferred to their summer quarters. Adjoining the mansion is a conservatory devoted to Camellias, Oranges, and plants in bloom, which are furnished from the reserve houses in the kitchen-garden; this house, like the larger one, having to be kept gay with flowering plants throughout the year. From this conservatory a corridor leads through a part of the grounds to the great conservatory, and is continued to the stables, which lie beyond. The corridor has an opaque roof, with glass sides made to open for ventilation in the summer, and is heated by hot-water pipes, to preserve an agreeable temperature in winter. By this arrangement Mr. Smith and his friends are enabled to visit the conservatory and stables in bad weather without the least exposure; and as the conservatory is admirably adapted for walking or even riding exercise, the luxury of getting there during bad weather in winter—a suggestion of Mr. Smith's—cannot be too highly appreciated.

This conservatory is 310 feet long, 40 feet wide, and 16 feet high

in the centre. It has a simple span-roof of wood, and is glazed with sheet-glass of the best quality; a row of handsome pillars gives support to the roof on each side, and these, and the braces and ties which connect them with the roof, are made available for training climbing plants, which not only hide the supports and braces, but give an additional charm to the interior. The house is heated by one boiler and a well-arranged system of hot-water pipes; both the heating and ventilating apparatus appear perfect. A gravel walk, seven feet wide, runs down the centre of the house.

The borders on each side the centre walk are divided into eight compartments; four of these have borders of prepared soil, in which, among some plants that remain permanently, plants in bloom are turned out, so as to maintain an uninterrupted succession of flowers: the other four compartments (which occupy the centre of the house), are furnished with stages for plants in pots; at the present time these were filled with a miscellaneous collection of plants blooming at this season—Calceolarias, Pelargoniums, Begonias, Fuchsias, Cinerarias, Acacias, Roses, Azaleas, and a host of other things, forming a double bank of bloom, very brilliant and striking. Our readers will be able to form some idea of the quantity of plants which have to be kept in stock for furnishing this house, when we inform them that it takes annually 60,000 pots of plants to keep up the requisite succession of bloom; and, independently of the great number of things which remain permanently in the borders, we should say 5000 plants in bloom are kept constantly in the house, all good-sized plants, many of them being fine specimens. On looking down the centre walk from either end of the building, the appearance of the masses of colour on each side, and the graceful climbers arched over-head and hanging from the roof, has a beautiful effect; from the north end, this view is heightened by the vista being connected with an avenue continued through the grounds, from the south door, for a considerable distance into the park. At the north end, which abuts on the kitchen-garden, Mr. Sandars has planted an admirable screen, opposite the end of the building, which effectually cuts off all appearance of the garden; the foreground of this is made into a Rosery, of which we shall have something to say hereafter.

Many of the specimens which have been growing for some time in the open borders of the conservatory are high bushes, of which we noticed Pelargoniums, Fuchsias, Callas, and many others. Cestrum aurantiacum, occasionally grown as a stove plant, flourishes here like a weed; and the like may be said of many other stove plants. The climbers for the roof comprise everything in that way—a profusion of Passion-flowers, Tecomas, Fuchsias (which, by the way, look exceedingly fine, with their branches of bloom hanging pendant from the roof), as does Begonia fuchsioides, which, treated as a climber, had reached a distance of 25 feet, and was covered with its crimson blossoms; Roses, Acacias affinis, dealbata, and pubescens, and many other things, very fine. Mr. Sandars has raised a number of new varieties of popular plants from seed, among which he has a strain of Calceolarias, very striking and distinct; they have been obtained by crossing Sultan with other varieties of a larger size, and the breed has rich crimson grounds

blotched with yellow, dark maroon, and other colours; we noticed one, a bright crimson self, very distinct, and likely to prove the parent of some choice varieties. One good thing Mr. Sandars studies in hybridising, which is to induce a shrubby habit in his seedlings, and many of the newest batch are a decided advance in this respect.

We question whether any other design would have so well answered the purpose for which this house was erected as the present structure. Built and finished in the most substantial manner, its large size gives an air of grandeur to its plain elevation, to our minds, much superior to the over-ornamented style of many similar structures. We omitted in the proper place to name, that the exterior walls are built up from the basement (four feet) with masonry, on which rest the upright sashes, forming the sides; a broad stone shelf runs round the interior, well adapted for growing plants requiring a deal of light. There is likewise a smaller path on each side of the house, accompanying this shelf for purposes of culture, &c. Connected with the large conservatory is a kind of reserve, or preparing-house for bringing on stove plants. This was filled with young stock; and, suspended from the roof, were magnificent specimens of Hoya imperialis, Allamandas, Ipomæas, &c.

The kitchen-garden we must notice in our next.

THE CULTURE OF THE HOVEA.

THE Hovea is one of the most ill-used plants in cultivation; it naturally grows erect and fast in excitable compost, but the soil cannot be too simple, provided it be healthy and clean. It is essential even when it is first struck as a cutting, that stopping should be attended to with unremitting attention; not more than the two leaves next the soil should be left, and these throwing out two more lateral shoots, give us an opportunity of stopping them at the first joint, and thus obtaining from each two more lateral shoots, which should be stopped in turn, for the same number again, thus continuing till it is perfect, but, like other plants, it cannot be neglected many days. This constant stopping should be continued till we have shoots enough to form a perfect bush; it is then by taking off all that are in the way, and leaving only such as will help to make a perfect bush, we may allow the plant to go on till it blooms; but after blooming the plants require pruning as regularly as a wall-fruit tree, and the new shoots should be regularly stopped and tied out, and the same provision made for the beauty and symmetry of the plant as in the first instance. Were the shrub left to itself and planted in rich soil, it might be made to grow six or eight feet in a single season, and in a season or two be absolutely unmanageable after the blooming season. The decayed bloom should by all means be removed, because the formation of seed pods would retard growth, and the shoot cut back as before intimated, because the bloom comes at the ends of the shoots, and the long under portion becomes bare of leaves and flowers. The two most beautiful are Hovea ilicifolia and Celsi. Loam and peat, with a free drainage, will answer well.

JOHN MOULD.

Devizes.

THE PEACH.

(*Continued from page* 131.)

THINNING the fruit, like disbudding, should be done at two or three times, and should be performed with care, so as to have the fruit finally left at regular intervals over the tree. On young trees, where the wood has been left long, two and even three fruit may be allowed to remain on each, as it is presumed the wood has been left long in consequence of the vigour of the tree. But where the trees have filled their allotted space on the wall, and the young wood has been cut closer in—to three or four eyes—one fruit will generally be sufficient; when this is determined on, the leading bud from these short shoots should be stopped, as two shoots to each would only crowd the tree with useless wood; the leading bud should therefore be pinched back, leaving two or three leaves and joints, and allow the shoot at the base to grow for next season's bearing wood; the lateral shoots made during the summer should be pinched out of the shoot stopped, but care must be taken of the leaves, as they will cause the sap to flow on freely, and on its return will nourish the fruit. Should these leaves not be left, or become injured, the fruit, although it would swell fully and be to all appearance as good as the rest, would be flavourless, as we have before observed when noticing the importance of having a growing terminal bud to each shoot. It may be recorded, that a rather larger crop of Nectarines than Peaches may be taken from trees, the size and vigour of each being the same.

It was formerly the practice to thin out the fruit, leaving a still extra quantity to allow for a number to drop off in stoning. I may here remind your readers that if proper attention is paid to thinning off the crop, and regulating it according to the strength of the tree, no fear need be entertained that any will drop off by the process if the trees are healthy. When you see such to be the case, you may be sure too many has been left on, or the tree is become sickly and cannot accomplish all you have allotted it to do. A tree which may be healthy enough to give support to and perfect the formation of the seed of 100 fruit, may fail in accomplishing the same for 200, or even 150. But here is the mischief: in this case the whole are supported alike up to a point, and when the energies of the tree cannot go further, the weakest fruit goes first, and as all are more or less affected, there is now no drawing a limit how far this dropping off may go; much will depend on the rapidity with which the first gives way, as there may yet be time for the tree to rally and perfect the rest. On the other hand, we have seen, particularly when being forced, the entire crop of Peaches and Nectarines fall off; whereas, had the trees been thinned in time, and those only left which the trees could carry out, the whole would have been saved.

In regulating the crop, it should be borne in mind that over-cropping has a deal to do with preventing the wood from ripening, for if the tree has to support an extra heavy crop a certain amount of energy is expended to effect this, which should have gone towards maturing the wood and organising fruit-buds for the following year; and where this

has been the case, a weak growth and a great number of abortive fruit-buds the following spring are the result. Your able correspondent, Mr. Saul, very justly lays great stress on this as an important point in fruit-tree culture, in which I entirely concur.

At page 109, I gave directions relative to keeping the borders dry after the middle of August. As, however, the border becomes filled with roots, it will require to be well supplied with water in dry weather up to that time; and where the trees are in full bearing, manure water may be given in July and the beginning of August, to assist the swelling fruit. I on no account advise strong ammoniacal liquid manure for the Peach—such as guano water, and water made from stable dung—but prefer the soakings from a cow-yard, or made with cow and pig manure, as more cooling and suitable to the Peach. If the border is well watered up to the middle of August, our directions at page 109 may afterwards be put in force. When the fruit begins to colour, go over the trees and finally lay in any stray wood omitted, and likewise remove any leaves which may shade the fruit too much; they will by these means get a high colour and flavour. I leave the protecting of the fruit from wasps and flies, as within the reach and comprehension of all. Avoid, however, wrapping the fruit in cotton wool, as I see many do, as the fruit is never good-flavoured, and in wet weather this plan spoils more than the insects. The hexagonal netting placed on frames, and hung before the trees, is the best plan where these pests are troublesome.

There are some kinds of Peaches, of which the Royal George is one, very subject to have the young shoots during the summer attacked with mildew, the leaves having the appearance of being covered with a white powder, which spreads rapidly over the adjoining leaves and young wood, destroying the leaves and preventing the growth of the shoot. To stop the progress of these fungi, mix quick lime and flower of sulphur in equal proportion; syringe or dip the infected shoots and leaves in water, and then cover them with the mixture, either by a brush or blowing it on the wood by a small machine sold for the purpose, or an old flour dredger may be used. This application must be repeated till the leaves assume their natural healthy colour.

Gather the fruit as it approaches ripeness, and allow it to remain for twenty-four hours in a dry room of medium temperature; this much improves the flavour.

When the fruit is all gathered, go over the trees, and at once cut away every piece of wood not wanted: next season, this will relieve the trees of an incumbrance, and the wood left will be more fully exposed for ripening. As the leaves change colour remove them by degrees, gently sweeping them off by a bunch of spray. The rest has been detailed in former papers, to which I must refer your readers for particulars.

Your readers will, I hope, bear in mind that these papers have been written from time to time, as wanted, without having had the advantage of that revision and comparison which, had they appeared as a whole, they would have had. They have been written from daily practice, and if found to contain points of practice worth following by the

amateur, as well as by my fellow-professionals, I shall be amply repaid for any trouble they may have cost me.

I beg to append a short list for the amateur to select from.

PEACHES.

Royal George	This is the most generally useful Peach, though apt to mildew in some situations.
Acton Scot	A good useful Peach.
Malta	Hardy, and succeeds well in cold situations.
Barrington	Fine hardy handsome Peach.
Bellegarde	Rather tenderer than the above, but a fine Peach.
Noblesse	Wants a warm situation.
Late Admirable, Chancellor	Only recommended where late Peaches are required.

NECTARINES.

Downton, Violette Hative	These are both good Nectarines.
Pitmaston Orange	Hardier than the above and a good Nectarine.

A GARDENER IN THE COUNTRY.

HINTS ON IMPROVING ENGLISH SCENERY.

IN our previous pages we have pointed out the importance of placing a proper value on such hardy trees and shrubs as are remarkable either for the colour or beauty of their leaves. If we examine the different varieties of Maples, Oaks, Sumachs, &c., at this season, whose leaves die off in the autumn to brown crimson and intermediate shades of colour, we shall find that the leaves, when first expanded, are tinted more or less with the prevailing colour they assume in the autumn. Acer coccineum, purpureum, rubrum, and circinatum; Liquidamber; Rhus typhina, toxicodendron, &c.; Quercus coccinea, rubra, tinctoria, &c.; the American Hickories, and many others, have their newly-formed leaves of various shades of brown or purple-brown colour, and are therefore valuable, as affording a pleasing contrast with the beautiful bright green of the Beech, Birch, Thorn, Limes, Horse Chestnuts, &c., at their period of coming into leaf, as they do in October, when their warm glowing colours so admirably enrich the landscape.

To those of our young readers who are making the composition of landscape scenery their study (and all young gardeners should do so), we recommend a careful examination of this peculiarity in certain trees to their notice, as worthy of being noted down, in addition to more particularly noticing the effect produced by their various shades of colour in the autumn.

If there is one thing more generally to be lamented in rural or park scenery than another, it is this deficiency in our plantations of trees, which, during the autumn, would, by the rich colour of their dying foliage, give an expression of warmth and tone to our scenery, and as such should make them worth specially introducing for the purpose. What an additional feature would be given to our ordinary plantations in the spring and autumn, if groups of the scarlet-leaved Maples, Oaks,

Sumachs, &c., were judiciously introduced—and how rich might English scenery really become with the deep browns, oranges, and crimsons of the kinds named, and others, intermixed with our ordinary forest trees.

These trees are now to be met with in most nursery grounds, and their expense is but trifling; in fact, there exists no reason why they should not be as commonly planted as Poplars, Elms, and the like, except that we fear taste is sometimes wanting, and, in other instances, the plants are not known sufficiently to be appreciated, or they may be thought too expensive.

Gardeners who have the management of plantations should take every opportunity of bringing these facts under the notice of their employers, or should introduce them on their own responsibility. As far as landscape gardeners are concerned, especially those who have commenced with being artists, we have not much hope that it will be done by them. Their profession, in a great measure, precludes that practical knowledge of trees—their colour, habit, and peculiarities—so essential to dictate their exact position in the landscape; and, with the most correct knowledge of design and effect, they fail in not being so well up to the study of colour in trees as the subject demands. Those, therefore, who have to carry out the designs of landscape gardeners, should be prepared to suggest what would recognise the admission of more colour into park and rural scenery.

ROYAL NATIONAL TULIP SOCIETY.

MAY 24.—The seventh anniversary meeting of this Society took place at the Crystal Palace, in connection with the great exhibition of plants, &c., and is fully reported in another page.

The spring has been unfavourable generally to the growth of the Tulip, yet there was a good show of blooms, far better than many were led to expect. Eighteen stands were put up for competition in one class alone, so that there were plenty in number. It was, however, too early for the midland growers.

The show for this season differed from its predecessors, there being no class showing. The committee may congratulate itself on the result—the experiment was in every way successful; neat uniform stands set the flowers off to advantage, besides the desirable change of being without the unsightly bottles.

The principal new flowers were Groom's Duchess of Cambridge, a feathered byblœmen; Groom's Lord Raglan, a flamed bizarre in the way of Shakspeare, but much finer shape; and Willison's Mr. Sanderson, a feathered bizarre, a small but beautiful flower.

There was a fine specimen of Lawrence's George Hayward exhibited—decidedly the best bizarre in the entire exhibition.

No premier prizes were given. Had there been, we should have placed them thus:—Feathered Bizarre, George Hayward (figured by us in 1854); Flamed Bizarre, Lord Raglan.

In Roses, Heroine would have taken first for feather, as it generally does. Headley's Mary Headley would have been the best flamed. Byblœmens, feathered, by far the best was a Chellaston, shown in the first stand for six blooms. The same flower was figured by us in 1852, under the name of Chellaston Beauty, but there is no certainty what the names of these Chellaston flowers really are.

The finest flowers of each class are marked with an asterisk. The first stands of twelve and six blooms were finely-grown specimens, very pure, and generally well marked. We subjoin the awards.

Class A, twelve varieties: 1st, Mr. C. Turner, Slough, *Lord Raglan, *Duchess of Cambridge, Aglaia, Maid of Orleans, *Triumph Royal, *Dr. Horner, *Blœmat, *Heroine, Selim, David, *Mary Headley, Polyphemus; 2nd, Mr. Lawrence, Hampton, Musidora, Caliph, Violet Alexander, Madame Vestris, Polyphemus, Lady Wildair, Duke of Devonshire, Don Pedro, Chellaston Rose, Vivid, David, Heroine; 3rd, R. H. Betteridge, Esq., Milton Hill, Abingdon, Thalia, George Hayward, Royal Sovereign, Aglaia, Triumph Royal, Lord Denman, Gygas, Seedling, Admiral Codrington, Madame Catalini, Duc de Boufleurs, *Claudigna; 4th, B. Colman, Esq., Norwich, Caliph, Kosciusko, Godet Parfait, Madame Vestris, Musidora, Polydora, Brulante Eclatante, Friend, Strong's King, Aglaia, Earl Douglas, Arlette; 5th, J. Hunt, Esq., Wycombe, Fabius, Violet Quarto, Shakspeare, Madame Vestris, Triumph Royal, Polyphemus, Lady Catherine Gordon, Julia Romano, Salvator Rosa, Brulante Eclatante, Princess Royal, Vivid.

Class B, nine varieties, for Amateurs only: 1st, C. Williams, Esq., London, Duchess of Sutherland, *Royal Sovereign, G. Bournonville, Duke of Devonshire, *Triumph Royal, Garrick, *La Belle Manette, John Kemble, Claudiana; 2nd, R. Betteridge, Esq., Triumph Royal, *George Hayward (very superior), Violette Alexander, *Royal Sovereign, Seedling, Emily, Incomparable, Brulante Eclatante, Shakspeare; 3rd, Mr. T. Westbrook, Abingdon, Royal Sovereign, Reine de Sheba, Triumph Royal, David, Claudiana, Shakspeare, Countess of Wilton, Vivid, Gibbon's Byblœmen; 4th, S. M. Sanden, Esq., Staines, Sylvia, Sampson, Sappho, Princess Maud, *Lord Denman, Duke of Devonshire, Seedling, Duchess of Sutherland, David; 5th, Mr. Lymberry, Nottingham, Rosa Blanca, Bacchus, Platoff, Rose Camellia, Shakspeare, Gem (Abbott's), Paul Pry, Violet Quarto, Lac.

Class C, six blooms, one feather and one flame in each class: 1st, Mr. C. Turner, *Lord Raglan (bizarre), Queen Charlotte (byblœmen), *Chellaston Beauty (byblœmen), *Aglaia (rose), *Heroine (rose), *J. Sanderson (bizarre); 2nd, Mr. R. J. Lawrence, David, Duke of Devonshire, Triumph Royal, Queen of the North, Polyphemus, Heroine; 3rd, R. Headley, Esq., Cambridge, Phœnix, David, Friend, Aglaia (flame), Aglaia (feather), Royal Sovereign; 4th, Mr. Bragg, Slough, Madame Vestris, Aglaia, Violet Blondeau, David, Sphinx, Shakspeare; 5th, S. M. Sanders, Esq., Royal George, Thomas Brown, Enchantress, Aglaia, Platoff, Bijou des Amateurs.

Class D, three feathered roses: 1st, Mr. Turner, *Heroine, *Aglaia, Arlette; 2nd, J. Hunt, Esq., Claudiana, *Bion, Heroine; 3rd, Mr. Thorniley, Manchester, Celestial, Rose Imperial, Comte de Vergennes.

Class E, three flamed roses, 1st, Mr. C. Turner, Triumph Royal, Aglaia, Anastasia; 2nd, Mr. R. J. Lawrence, Madame Vestris, Lady Wildair, Aglaia; 3rd, Mr. Treacher, Wycombe, Lannia, Triumph Royal, Bacchus.

Class F, three feathered byblœmens: 1st, Mr. C. Turner, *Duchess of Cambridge, Coupe de Hebe, Victoria Regina; 2nd, Mr. Hunt, Lady Denman, Helen, Eliza; 3rd, J. Brown, Esq., Sydenham, Eliza, Midland Beauty, Gem (Abbott's).

Class G, three flamed byblœmens: 1st, Mr. J. Hunt, East Hendred, Passe Salvator Rosa, Incomparable, Chellaston Byblœmen; 2nd, Mr. R. J. Lawrence, Beauty of the Glen, Don Pedro, Violet Alexander; 3rd, Mr. C. Turner, Sarah Anne, Marshal Pelissier, David.

Class H, three feathered bizarres: 1st, Mr. C. Turner, Eurydice, Dr. Horner, King (Willison); 2nd, J. Hunt, Esq., Rembrandt, Polyphemus, Fabius; 3rd, Mr. R. J. Lawrence, Ulysses, Fabius, Vivid.

Class I, three flamed bizarres: 1st, Mr. C. Turner, *Lord Raglan, *Polyphemus, Selim; 2nd, Mr. Bragg, Polyphemus, Shakspeare, Darius; 3rd, J. Hunt, Esq., Charbonnier, Marcellus, Pilot.

Class K, six rose breeders: 1st, Mr. Westbrook; 2nd, R. Headley, Esq.; 3rd, Mr. C. Turner.

Class L, six byblœmen breeders: 1st, Mr. C. Turner; 2nd, R. Headley, Esq.; 3rd, J. Hunt, Esq.

Class M, six bizarre breeders: 1st, R. Headley, Esq.; 2nd, Mr. Slater, Manchester; 3rd, J. Hunt, Esq.

GRAPES FROM EYES THE FIRST SEASON.

In reference to what Mr. M'Ewen states on this, as having been practised by Mr. Elphinston, I beg to say, without wishing to detract anything from the party in question, that I saw it done for several years consecutively at Woodchester Park, in Gloucestershire (formerly a residence of the Earls of Ducie), by my friend Mr. Wm. Pillans, now gardener at Alnwick Castle, Northumberland. This is now more than twenty years ago, and his success was complete, as I saw him cut bunches of Sweetwater Grapes 1¼lb. by this method, in September. Mr. Pillans, who was then—as now—one of the most enterprising gardeners I know, was likewise a great hybridist, in Pelargoniums particularly, which the late Earl Ducie much admired. Had he continued his experience up to the present day, he would have had a strain of Pelargoniums second to none.

GLOUCESTER.

LANDSCAPE GARDENING, No. IV.

It has been our aim, in the course of articles we have given in this periodical, to make the examples illustrative of such modes of treatment as are suitable for the various contingencies and requirements which mark different cases. However, we necessarily deal with principles

rather than details, as the former apply with equal force to every case of the same kind or class, and the latter are seldom suitable, excepting to the special case for which they are designed. It has been our impression that such treatment of the subject is most likely to be practically useful, and we shall from time to time, by a retrospective article, bring the detached articles into such systematic order that the leading principles exemplified in each may be so arranged as to serve as an index, and aid such end by reference as may render them of service.

The subject we have taken this time is a garden to a villa in one of the southern suburbs, in which a small piece of very irregular shape was submitted to us to be arranged, with a view to make it useful to a certain extent, as well as ornamental. The useful elements required were a consistent amount of fruit garden, and a moderate portion of ground for the choicer vegetables. We have taken it for the subject of this paper, as it affords us an opportunity to give prominence to some matters of economical gardening.

The house was already built at the north-east corner, and the south end, occupied by large trees which the proprietor had covenanted not to destroy. The wall at the north end was existing, and bounded the property.

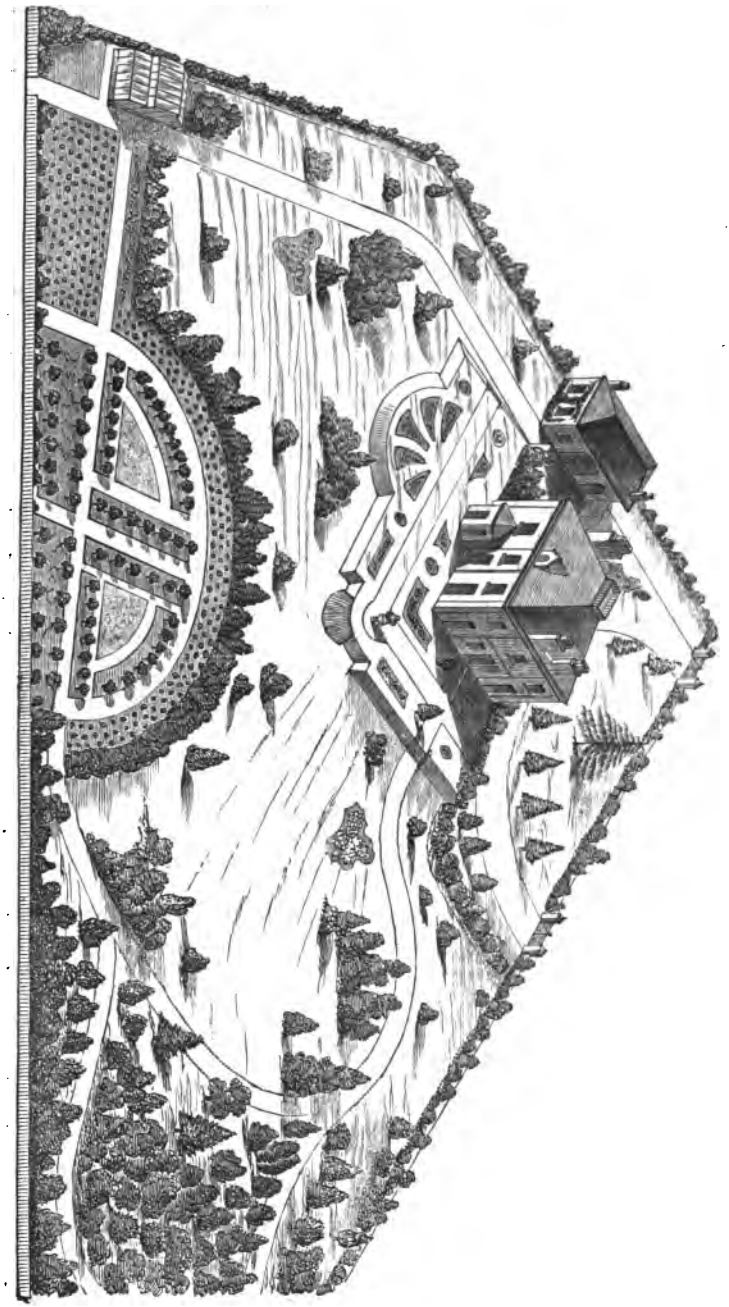
The portion for the kitchen garden was the first thing to decide upon. It was not expedient to place it under the shade of the large trees, neither was it desirable to let it occupy too large a space at the north-west corner, where the direct view from the windows would have looked on to, or against it. We made it our object, therefore, to preserve the greatest space possible of lawn, in direct line from both the west and north fronts, and bringing down the broadest part of the fruit and kitchen garden opposite the corner of the house. The wall at the north end having a south aspect towards the garden, it was determined should be devoted to the choicer wall fruits, with an intermixture of ornamental climbing plants, which should be allowed to occupy all the space which the fruit trees did not make use of. The wall thus became an appropriate link between the flower garden and kitchen garden, and the walk after leaving the terrace; passing the wall; entering, passing through, and emerging from the kitchen garden, and skirting or winding through the thick planting, returned to the terrace. The terrace is excellent in its effect of increasing the extent of the ground, by detaching the flower garden proper from the open lawn.

The site for the conservatory was fixed upon, partly on account of existing wall, and partly that it might stand in the confines of both kitchen garden and lawn; being too large and important an object to conceal, it was determined that it should be ornamental.

The semicircular outline to the kitchen garden is obviously a suitable arrangement, where it is desirable to conceal all semblance of formality on the outside.

The fruit trees on the borders are all dwarfs aad pyramids, to be kept within compass by root-pruning, the only mode of growing them by which they are preserved in size and shape fit for gardens generally, and especially small ones.

The kitchen garden is bounded on the lawn side by a hedge of



common Arbor-vitæ, clipped on the inside and broken on the outside by masses and groups of various kinds of shrubs. We would specially call attention to the excellence of the common Arbor-vitæ as a material for evergreen fences, being cheap, efficient, and ornamental.

WILLIAM DAVIDSON.

CRYSTAL PALACE EXHIBITION.

THE Crystal Palace Company issued a schedule of prizes that was well responded to on the 24th ult., as on that day an excellent display of plants and fruits was brought together, and was inspected by a numerous attendance of visitors. The arrangement of the exhibition this year was much more efficient than last, and on the present occasion was confined to the transept and nave. We do not consider the exhibition so extensive as last year, but it was much more select, and in many respects better. The Messrs. Rollisson and Sons did not compete, and the absence of their collections of course detracted from the general display.

In some remarks we made at the time on the show of last year, in reference to the suitability of exhibiting plants under a glass roof, we expressed our dissent from the plan as one ill calculated to show off plants to the best advantage, owing to the glare of light falling from the roof having an overpowering effect on the colour of the flowers. This season a canvas screen was placed over the stage containing the plants, to intercept the light from the roof, and this was found to be a great improvement, and, so far as preventing the vertical light from reaching the plants, answered the purpose; but in a building all glass, and consequently admitting the light from every side, it is very difficult to place plants in a position where their colours can be seen to the best advantage: add to this the many objects to detract attention, all of which help to lessen the effect of the plants themselves, and render them less interesting.

Notwithstanding these drawbacks, however, the show was a glorious one; the collections of plants presented wonderful instances of horticultural skill and energy. Much of the fruit, too, was fine, though why some exhibitors will persist in sending green Grapes and other things unfit for exhibition is to us a mystery. Mr. Davis, of Oak Hill, had a fine collection of Pine-apples and Grapes. There were also some remarkably good Melons; two, under the name of Orion, shown by Mr. Boreham, were both fine, and, we understood, well flavoured. We have seen better Strawberries, but then Mr. M'Ewen was not there. Cherries were very good, and Nectarines particularly fine for the season.

We hope, supposing the Company intend holding their June show in the building, they will have the September one in the grounds under tents. In wet weather the building, so far as the comfort of the visitors is concerned, is the best place; and as the weather, even in June, may be uncertain, it might not be safe to venture out. We hope, however,

that if the season is at all favourable, the September exhibition will take place under canvas; and it will be much more enjoyable, and will leave more room for the public to inspect the many and varied treasures of the building at leisure.

In 25 Stove and Greenhouse Plants grouped for effect, Messrs. Veitch and Son were first with a splendid collection of ornamental plants; Mr. G. Young, of Dulwich Hill, 2nd; and Mr. James Morris, gardener to Coles Child, Esq., 3rd. For 20 Stove and Greenhouse Plants, Mr. May, gardener to H. Colyer, Esq., Dartford, was first with a collection of fine plants, among them being the veteran gigantic Epacris miniata grandiflora, a fine Eriostemon nerifolium, and good plants of Pimelea spectabilis, Hedaroma tulipiferum, but not sufficiently in bloom; Aphelexis speciosissima, and Gompholobium polymorphum; 2nd, Mr. G. Barter; 3rd, Mr. John Green, gardener to Sir E. Antrobus, Bart., in whose collection were good plants of Tetratheca ericifolia, a very pretty greenhouse plant, with a profusion of bright lilac flowers, and Franciscea calycina; 4th, Mr. Rhodes, gardener to J. Philpot, Esq., Stamford Hill. For 12 Stove and Greenhouse Plants in Flower, Mr. Dods, gardener to Sir John Cathcart, Bart., Englefield Green, was deservedly first with a collection of superb plants, the most attractive being fine plants of Azalea Gledstanesi, Pimelea spectabilis, Epacris miniata grandiflora, and Boronia pinnata: this exhibitor seems determined to maintain his position as a skilful cultivator; 2nd, Mr. Carson, gardener to W. F. G. Farmer, Esq., among whose plants were fine specimens of Azalea variegata, Chorozema Lawrenceanum, and Aphelexis macrantha purpurea. Mr. Roser also exhibited in this class, and had a good plant of the charming Boronia Drummondi. Extra prizes in this class were awarded to Mr. C. Smith, gardener to A. Anderson, Esq., Norwood, and Mr. Jas. Morris, gardener to Coles Child, Esq., Bromley. For six Stove and Greenhouse Plants, 1st, Mr. Cutbush, Barnet; 2nd, Mr. Taylor, Streatham; 3rd, Mr. W. Laybank, Norwood; 4th, Mr. Williams, gardener to Miss Traill. Extra prizes were also awarded to Mr. G. Brush, Norwood, and Mr. Page, Streatham. Four other collections were also staged.

Orchids were supplied in their usual profusion and beauty; and, judging from the eager and patient attempts of many to get a glance at them over the shoulders of the crowd which continually surrounded them, we should say that they have lost none of their interest. A very fine collection was furnished by Messrs. Veitch. It contained Calanthe veratrifolia, a noble plant; Cattleya Mossiæ, covered with showy flowers of extraordinary size; C. intermedia, the large variety of Oncidium ampliatum, Dendrobium Farmeri, the purple variety of Aerides odoratum, a handsome variety of Saccolabium Blumei, two beautiful plants of Phalænopsis, the rich orange scarlet Lælia cinnabarina, the rare Cypripedium villosum, and other Lady's Slippers; Vanda suavis, and the greatly prized Epidendrum vitellinum. Another excellent collection came from Mr. Gedney, gardener to Mrs. Ellis. In this we observed beautiful examples of Oncidium ampliatum. Cattleya Mossiæ, Saccolabium guttatum, Dendrobium nobile, D. densiflorum, a magnificent plant, beautifully in bloom; the Rhubarb

scented D. macrophyllum, extremely well-flowered; Calanthe veratrifolia, with many spikes of snow-white blossom; Phalænopsis grandiflora, finely bloomed; Phaius Wallichi and Lycaste Skinneri, both, but more especially the latter, literally covered with flowers. Mr. Mylam, gardener to G. Reed, Esq., also furnished a very fine group. In this was the stately Phaius Wallichi, one of the best bloomed plants of Vanda teres that has perhaps ever been shown; the sweet smelling V. suavis, Epidendrum alatum, Dendrobium densiflorum, with some twelve bunches of yellow flowers; D. Farmeri, the rare Cattleya Aclandiæ, Barkeria spectablis (beautifully bloomed), Cattleya Mossiæ, nearly three feet high, as much through, and covered with flowers; the charming Saccolabium præmorsum; Odontoglossum hastilabium; Lælia purpurata, a comparatively little known species of rare beauty; and Odontoglossum citrosmum, with much more colour in it than is usually found in flowers of this plant. Mr. Woolley, gardener to H. R. Ker, Esq., and others, also showed Orchids, but the above formed what may be termed the cream of the collections.

For 12 Azaleas, Mr. Green, gardener to Sir E. Antrobus, Bart., was first with superb plants loaded with flower, the foliage of many being scarcely visible; the best were Perryana, Gledstanesi, Triumphans, Iveryana, and coronata. Mr. Gaines, and, we believe, others, exhibited in this class, but we could not get near the plants. For six Greenhouse Azaleas (amateurs) Mr. Carson was first with Broughtoni, sinensis, speciosissima, rubra pleno, a splendid plant of lateritia, and variegata, all very fine well flowered plants; 2nd, Mr. R. Roser, in whose collection was a superb plant of Optima; 3rd, Mr. R. Grix; 4th, Mr. J. May, gardener to H. Colyer, Esq., Dartford. Extra prizes were also awarded to Mr. W. Taylor, Streatham; Mr. Brush, Norwood; Mr. H. Smith, Roehampton; and Mr. Jas. Morris, Bromley. In the class for 12 Greenhouse Azaleas of new kinds, Mr. R. Roser, Streatham, was first, the best among his being Marie, brilliant orange scarlet; Formosa, Frotheniana, a fine light carmine variety; Magnifica, a fine white variety; Juliana, pale orange scarlet, fine; Formosa, a striped white variety; Glory of Sunning Hill, Delicata, Admiration, and Constantia rosea. 2nd, Mr. Green; 3rd, Messrs. Frazer; 4th, Mr. Taylor. An extra prize was awarded to Messrs. Lane and Son. None of these plants were large, but it was an interesting class. For 10 Cape Heaths, 1st, Mr. Williams, gardener to Miss Traill; 2nd, Mr. Roser; 3rd, Mr. May, Dartford; 4th, Mr. B. Reed, Norwood. Messrs. Frazer also exhibited in this class. In Mr. Williams's collection were good plants of Devoniana, a very fine variety; tortulæflora, ventricosa coccinea minor, and mutabilis. An extra prize was also awarded to J. Philpot, Esq. For six Cape Heaths, 1st, Mr. Taylor, gardener to J. Coster, Esq., Streatham; 2nd, Mr. W. Cutbush, Barnet; 3rd, Mr. W. Laybank, gardener to J. Maudsley, Esq., Norwood; 4th, Mr. Young, gardener to W. Stone, Esq., Dulwich. An extra prize was also awarded to Mr. G. Barter, gardener to A. Bassett, Esq., Stamford Hill. Three other collections were exhibited in this class. Two collections of six Tall Cacti were exhibited: 1st, Mr. Green; 2nd, Mr. R. Grix, Cheam. For six Rhododendrons, 1st prize to Messrs. Lane & Son, for

good plants of aureum, Sabinum, decorum majus, primulum elegans, sulphureum, delicatum, all distinct and good varieties of the "aureum" section; 2nd, Messrs. Standish & Noble; 3rd, Mr. Gaines.

The Roses in pots were an especial feature. The first prize for twelve Roses in pots was awarded to Messrs. Lane and Son, for some superb plants, the best being H. P. Baronne Prevost, H. P. Leon des Combats, Noisette Lamarque, a very fine H. B. Paul Perras, H. P. Duchess of Sutherland, with more than fifty fully-expanded blooms; a very fine Tea Adam, Comtesse Molé, Souvenir d'un Ami, fine; Louis Peyronny, and Coupe de Hebe; 2nd, Messrs. Paul & Son, in whose collection was a superb plant of the rich yellow Tea China Rose, Viscomtesse de Cazes; also fine plants of Jules Margottin, Paul Perras, Chenedole, Mad. Laffay, Geant des Batailles, Blairi, Belle Marie, Coupe de Hebe, Louis Bounaparte, Tea Mansais, and Paul Ricaut; 3rd, Mr. Francis, Hertford, his best being Elise Sauvage, Coupe de Hebe, and Noisette Lamarque. Mr. Wilkinson, of Ealing, also exhibited twelve small plants budded on Celina Stocks, among them being Tea Madame Willermoz, a very fine pale creamy-blush variety.

In the amateur class for six Roses in pots, Mr. Busby was first with some very good plants, the best being Chenedole, Paul Perras, Madeline, Gen. Jacqueminot, Auguste Mie, and William Jesse; 2nd, Mr. A. Rowland, Lewisham; 3rd, Mr. W. Mortimore, Hornsey.

The first prize for six Calceolarias in pots was awarded to Mr. George Lambert, Oakwood, near Chichester, for very fine well-grown plants; 2nd, Mr. John Cole, nurseryman, St. Albans, with six shrubby varieties, among them being Grandis, a fine variety for pot culture, something like Ajax in colour, but not so tall a grower; 3rd, Messrs. Dobson & Sons, with compact well-grown plants. Seven others also exhibited in this class, one of them being Mr. John Liley, gardener to G. King, Esq., Edenbridge, whose plants were of inferior growth, and rendered very unsightly by a mass of large sticks.

The first prize for six Fuchsias in pots was awarded to Mr. Bousie, gardener to the Right Hon. Henry Labouchere, M.P., Stoke, Bucks, for some of the finest plants we have ever seen. The sorts were, Queen of Hanover, Autocrat, Alpha, Macbeth, Glory, and Othello. These were grown on a single stem, tall, bushy to the bottom, and well flowered; 2nd, Mr. O. Rhodes, gardener to J. Phillpot, Esq., Stamford Hill; 3rd, Mr. H. Chilman, gardener to Mrs. Smith, Epsom. Three other collections were staged, Mr. George's plants being large, but grown too freely, and Mr. Lamy's were old varieties that should now be discarded, and the plants were not well bloomed.

There was a good display of Pelargoniums. For twelve Pelargoniums, Mr. Charles Turner, Slough, was first with some superb plants, well grown and blooms of excellent quality. The varieties were, National, Wonderful, Una, Sanspareil, Basilisk, Majestic, Governor-General, Arethusa, Lucy, Petruchio, Carlos, and Magnificent; 2nd, Messrs. Dobson & Son, with Harriet, Bouquet, Arethusa, Rosamond, Delicatum, Ambassador, Conqueror, Gertrude, Lucy, Purpureum, and Roseum, the colour of Governor-General, but not so good. Messrs.

Frazer's collection, although containing many of these varieties, was deficient in clearness and brightness of colour, so apparent in the first and second collections. Mr. Gaines exhibited a collection, consisting of French and other varieties, some of them quite unknown to us, and possibly new, but we did not recognise any good varieties among them.

In the amateurs' class for six Pelargoniums, Mr. Nye, gardener to E. Foster, Esq., Clewer Manor, near Windsor, was first with very fine plants, covered with flowers of good quality; 2nd, Mr. Wiggins, gardener to E. Beck, Esq., Isleworth. Others exhibited in this class, but we were unable to take notes of them.

For twelve Fancy Pelargoniums: 1st, Mr. Charles Turner, with Empress of France, Electra, Madame Sontag, Delicatum, Celestial, Mary Howitt, Lady Hume Campbell, a superb plant of Jenny Lind, Queen of Roses, Cloth of Silver, Conspicuum, and Richard Cobden. These plants exhibited the peculiar qualities characteristic of the Slough collections; 2nd, Messrs. J. and I. Frazer, with Advancer, Delicatum, Madame Sontag, Princess Alice Maude, Formosissimum, Princess Marie Galitzin, Miss Sheppard, Jenny Lind, Argus, Floribunda, Celestial, and Gaiety; 3rd, Messrs. Cutbush & Son, Highgate; 4th, Messrs. Dobson & Son.

For six Fancy Pelargoniums: 1st, Mr. Winsor, gardener at Kiddepore Hall, Hampstead, with Magnifica, Duchesse d'Aumale, Fairy Queen, Berrier, Electra, and Princess Alice Maude, all fine plants and well flowered. Mr. Bousie was a good *second*, with Delicatum, Perfection, Princess Marie Galitzin, with a superb head of fine bloom; Triumphant, a well-flowered plant of Formosissimum, and Richard Cobden. Mr. Weir, of Hampstead, had six well-grown plants, but not sufficiently in bloom, excepting Jenny Lind, which was a very fine plant, and there was not sufficient variety in this collection. Mr. Carrigan's collection had evidently been grown too freely, and was in consequence very deficient of bloom. Mr. Joseph Monk, Cranbrook Park, Ilford, sent six wretched-looking plants that would not have found a ready purchaser in Covent-garden market. Mr. Lambert's were nicely grown plants, but not sufficiently in bloom. There were also four other exhibitors in this class.

In the classes for newly introduced plants were exhibited Begonia splendida, with large crimson leaves; and the Hedaroma tulipiferum, to which a second prize was awarded; both plants came from Mr. Epps, nurseryman, Maidstone. The judges, however, seem to have made a mistake in awarding a prize to the Hedaroma, as the schedule states that "no plant will be considered new that has been shown at the metropolitan exhibitions in a previous season," while examples of Hedaroma tulipifera have been frequently exhibited. Mr. Miellez, of Lille, sent a new Gesneraceous plant, of no great beauty, with pale Gesnera-like flowers; and Messrs. Standish & Noble sent Azalea amœna floribunda and A. amœna grandiflora. Messrs. A. Paul & Son had a new Bourbon Rose, Bacchus, of good form, colour pale rose. From Messrs. Veitch & Son came the beautiful Ouvirandra fenestralis, or Lattice Plant, and a plant of the Sundew (Drosera dichotoma), two of the most interesting plants in the exhibition. The same firm also

exhibited the beautiful Embothrium coccineum, a hardy shrub, with a profusion of bright scarlet flowers: this will be a valuable addition to our hardy shrubs; Philopodendron species, a New Zealand shrub, of no beauty, and only to be valued as a botanical curiosity; a beautiful dwarf growing Fern, Gleichenia microphylla, Rhododendron cinnabarinum, Brodiæa species, a new hardy bulb from California; Ceanothus origanus, a new hardy dwarf growing shrub, with a profusion of white flowers; Correæa cardinalis, with very bright scarlet flowers; and a new Tropæolum Schumannianum, of a pale yellow colour, with dark blotches in the upper petals, and partaking of the habit of the garden Nasturtium. The first prize for six Nepenthes was awarded to Messrs. Veitch & Son, among them being very fine plants of N. lævis and N. phyllamophora.

A great many subjects were shown in the Miscellaneous Class. From the conservatory at Trentham were cut flowers of Cantua dependens, of a bright rosy carmine colour, and handsome; a box of cut Rhododendrons from Mr. A. Ingram, gardener to J. J. Blandy, Esq., Reading, among which were ignescens, a very fine rich scarlet variety; Captivation, pale rose; and Blandyanum, deep rose, also very fine. Mr. Bragg had a collection of Pansy blooms; and Mr. R. Roser, of Streatham, sent a handsome brace of the Himalaya Cucumber, a fine smooth Black Spine variety. Mr. H. White, of Chelmsford, exhibited a brace of the Essex Rival Cucumber, both of which were nearly two feet long, handsome, but a little ribbed: black spined; both of these varieties carried the flowers at the points. Mr. Cole, of St. Alban's, sent a collection of 12 shrubby Calceolarias, but we did not observe any of them to be decided acquisitions as bedding-out plants; and Mr. Dennis, of Chelsea, sent 12 plants of his Geranium Alma, a good bright coloured market variety. Mr. Hamp had a collection of Amaryllis; Mr. Taylor, Streatham, a collection of compact well-grown Aphelexis; Mr. Dall, gardener to James Renny, Esq., Pimlico, exhibited six good Gloxinias, among them being fine plants of Haacke, shaded purple; Stellata, white, with carmine throat, fine; and Castilloni, pale rose, with bright carmine throat. These are fine varieties of the erecta section, the upright growing Gloxinias, and are much superior to the other varieties for exhibition purposes. Mr. G. Young, gardener to W. Stone, Esq., Dulwich, also sent 12 Gloxinias, the best sorts being Imperial, a fine light coloured variety; Carminata splendens, Duke of Wellington, Maria Van Houtte, and Victoria Regina. Mr. Forsyth, gardener to Baron Rothschild, contributed a collection of seedling Calceolarias, fine varieties, but small plants; and Mr. Lavey, gardener to E. A. De Gram, Esq., of Fitcham, a collection of Petunias and other plants, and a collection of 24 Ferns. Mr. C. Turner sent 12 fine plants of Cinerarias, consisting of Emperor of the French, Admiral Dundas, Purple Standard, Viola, Orlando, Etoile du Vaise, Duchess of Wellington, a fine formed variety; Sir C. Napier, Lady Paxton, Magnum Bonum, Bousie's Optima, and Brilliant, an extra fine light blue edged variety; Mr. Wiggins, gardener to E. Beck, Esq., Isleworth, also sent 12 Cinerarias, among them being Excelsior, a good variety, and an improvement on Scottish Chieftain. A collection of good seedling Calceolarias came from Messrs. Smith, Dulwich. Miscellaneous plants from Mr. Dunsford, Chingford;

seedling Heaths, triumphans rosea and andromedæflora rosea, from Messrs. Jackson & Sons; and four fine Azaleas from Messrs. Ivery & Son, of Dorking: these were Beauty of Reigate, a handsome striped white variety, of Lateritia habit; Iveryana, also a handsome striped variety; Criterion, and Rosea superba. Messrs. Ivery also exhibited a collection of Azaleas, among which we particularly noticed Criterion, Trotteriana, bright rosy carmine, and a free bloomer; Lord Raglan, pale salmon pink, large, but deficient in form and substance; General Williams, a fine variety, pale orange scarlet, of good form; and the beautiful Crispiflora. From this firm also came cut flowers of Rhododendron ponticum coccineum, very deep rich scarlet, fine truss, one of the parents evidently being arborea. Messrs. Dobson & Son staged 12 Pansies in pots, the sorts being Queen Victoria, Omar Pacha, Father Gavazzi, Mary Taylor, Marian, Emperor, Aurora, Satisfaction, Nonpareil, Great Western, Constance, and Topaz. Some of these subjects received awards, but owing to the difficulty of getting a full report, the company being so numerous, we are unable to give them further.

FRUIT.—Only one collection was sent, by Mr. Fleming, of Trentham. It contained a well coloured and swelled Moscow Queen Pine, very fine Black Hamburgh Grapes, some beautifully ripened Nectarines, good British Queen Strawberries, two nice Melons, two dishes of Plums (well ripened), and fine May Duke Cherries.

In letter B, collections of Pine-apples, Mr. Davis exhibited a fine collection, which obtained the first prize, containing Providence, Black Jamaicas, one Blood Pine, Enville, and several Queens—in all, thirteen. The next prize was awarded to Mr. Nichol, Oxton Park, Devon, for an Enville Providence and Cayenne. Mr. Robinson, of Hedson, also exhibited three fine Providence Pines in this class, but being all the same variety, the judges could only award them an extra prize of the first class. For single specimens of Providence, Mr. Davis was first with a well swelled fruit; Mr. Robinson, second; and Mr. Bailey, Shardelowes, third: these were all well swelled fruit for the season. For single fruit of the Queen, Mr. Turnbull, of Blenheim, was first with a well swelled fruit; Mr. Davis, second; Mr. Jones, Dowlais, South Wales, third, with a fine fruit rather past its best; and Mr. Peed, of Norwood, fourth. In Jamaicas, Mr. Davis, of Oak Hill, was first, with a well-grown Jamaica; Mr. Jones, second, with the same; Mr. Taylor, Streatham, third, with a smooth Cayenne, a nice fruit; Mr. Turnbull, fourth, with a prickly Cayenne, over-ripe.

For collections of three dishes of Grapes, Mr. Turnbull, gardener to the Duke of Marlborough, Blenheim, was awarded the first prize. His collection contained very fine Muscats, very good St. Peter's, and well-ripened Black Hamburgh; the second prize was given to Mr. Monroe, gardener to Mrs. Oddie, Colney Hatch, for Grizzly Frontignan, Black Hamburgh, and Sweetwater; a third prize was also given to Mr. Tegg, Roehampton. Single dishes of Black Hamburgh: A large number of dishes was exhibited. The best were sent by Mr. Davis, of Oak Hill, and were fine specimens of good cultivation; the second prize fell to Mr. Clarke, of Hoddesdon, for fruit not much inferior to the above; the 3rd, to Mr. E. Bundle, Streatham; fourth, to Mr. Spary, Brighton—

these latter were rather small, but were intensely black and well-ripened. For single dishes of Frontignans, &c., the first prize was gained by Mr. Henderson, of Coleorton, with the Grizzly; the second prize was given to Mr. Reid, gardener to J. Hunt, Esq., Sydenham, for Chasselas Musque. For single dishes of Muscats, Mr. Turnbull's were the dishes selected for the first prize; these were good both in bunch and berry, and tolerably ripe: some others exhibited were not considered ripe enough for exhibition. In class J, Sweetwaters, &c., Mr. Davis was first with some beautifully ripened Sweetwaters; Mr. Jackson, Lambeth, was second for a dish but little behind the first; Mr. Smith, gardener to — Ricardo, Esq., third; and Mr. Williams, Hoddesdon, fourth, for fine and well-ripened Muscadines.

For single dishes of Peaches, Mr. Gardner, gardener to Sir George Phillips, had some well-ripened Royal George, which were placed first; Mr. Fleming was second with Royal George; Mr. Evans, gardener to C. D. Newdegate, Esq., M.P., Arbury, Warwickshire, for Violette Hative; and Mr. Hill, fourth, with Royal George.

Nectarines were very good. Mr. Fleming was first with a dish of large well-coloured Violette Hative; Mr. Hill, second, with the same; Mr. Evans, gardener to C. D. Newdegate, Esq., M.P., was third.

The prize for the heaviest Melon was awarded to Mr. Boreham, for Orion, weighing 5 lbs. In the next class (Green-flesh), Mr. Boreham was also first for the same variety; the second prize was given to Mr. Nichol, gardener at Oxon House, Devon, for a small but highly-flavoured Melon called Marnal Patamn; the same grower had also a fine Bromham Hall. Of scarlet-fleshed Melons, the only one was from Mr. Ewing, Bodorgan, a fine-flavoured variety and handsome fruit.

For single dishes of Figs, equal first prizes were given to Mr. Richards, Grinston, York, and Mr. Busby, Stockwood; the second to Mr. Tegg; and fourth to Mr. Bain, gardener to — Perkins, Esq.

Collections of Cherries—three dishes: Mr. Fleming, first, with Elton, Black Eagle, and May Duke—all excellent fruit; second, Mr. Evans, Arbury, with Early Purple Griotte, Circassian, and Duke. Single dishes: 1st, Mr. Shute, gardener to Lord Wilton, Heaton, for May Duke; 2nd, Mr. Evans; 3rd, Mr. Monroe; Extra, Mr. Fleming.

Plums: Mr. Fleming for Early Prolific, a dark purple fruit.

Strawberries—three dishes: 1st, Mr. Ewing, Bodorgan, for good Queens, Bicton White (a dirty looking fruit), and Keens' Seedling; 2nd, Mr. Turnbull. Single dishes: 1st, Mr. Dunsford, for fine Queens; 2nd, Mr. Gillham, for very good Keens; 3rd, Mr. Ingram, gardener to — Blandy, Esq., Reading, for exceedingly well-grown Alice Maudes.

Mr. Forsyth, of Gunnersbury Park, exhibited four pot Vines (Black Hamburghs), in fruit. We counted twenty-one bunches of nicely grown and coloured fruit on the four Vines.

Miscellaneous class: 1st, Mr. Davis, for a basket of his fine Black Hamburgh Grapes; 2nd, Mr. Spary, for a nearly similar basket—the fruit smaller, but very highly coloured; 2nd, Mr. Allport, for Black Frontignan Grapes. Mr. Hill, for Black Prince (fine); Mr. Williams, Hoddesdon, for Citrons; Mr. Clarke, for ditto, new variety; Mr. Tillyard, Heckfield, for some exceedingly well preserved Pears, were likewise awarded prizes in this class, in the order we place them.

The exhibition altogether was most successful, and Mr. Eyles and his staff of assistants were unremitting in their exertions for the accommodation of the exhibitors.

CALENDAR OF OPERATIONS FOR JUNE.

Auriculas.—By no means allow these plants to become saturated with too much rain. Follow generally the treatment recommended last month.

Azaleas.—Any young plants of new kinds, which it may be desirable to increase in size, should be shifted into larger pots and should be kept in the closest part of the house, and should be shaded in very bright weather and syringed daily. See previous Calendars.

Camellias.—Many of the early flowering kinds will now show their bloom buds. If wanted to flower early they must still be kept warm, but the atmosphere must be kept drier; discontinue syringing, for if kept too moist it will induce a second growth, which generally spoils the bloom. Prepare some strong turfy loam and peat for potting them next month.

Carnations and Picotees.—The staking of these having been by this time completed, keep the plants clean of all dead foliage, as well as aphides. Remove the surface of the soil, should it become sour, and top-dress both pots and beds with good rich soil. It will be of advantage to turn the pots round occasionally. The pots must not be stood on the ground, but be kept well drained by being placed on strips of slate or wood.

Cold Frames.—Though the plants which have occupied these during the winter and spring will now be all planted out, they should not be empty one single day. They can be turned to a variety of purposes; either to grow tender annuals, or Melons and Cucumbers, or soft-wooded greenhouse plants.

Conservatory and Show-house.—Pelargoniums, Calceolarias, Fuchsias, Roses, &c., will assist in keeping up a good display of flowers. Observe the most scrupulous order and cleanliness. Give plenty of air, and in fine weather leave the lights open all night. Attend to the tying and regulating of the creepers. All planted-out specimens in a growing state should have liberal supplies of water, and occasionally a good dose of liquid manure.

Cucumbers.—Keep up a regular bottom heat; do not let the shoots get crowded. Attend to directions in former Calendars.

Dahlias.—These having been grown into good plants as previously recommended, should now be planted out, choosing a fine day when the soil is tolerably dry. Use a little fine rich soil for planting them in, after turning in a few spits of rotten manure underneath the spot marked out for planting them out. The distance from each plant should be from four to five feet, according to the nature of the soil. If it be rich and deep, the Dahlia grows to a much larger size than it does in a poor or very stiff soil. Stake them securely as they are planted.

Flower Garden.—In dry weather water all newly-planted flowers: this should be done towards night and effectively, rather than too often. Arrange and fix with pegs in the proper places, the shoots of Verbenas, Petunias, &c. Attend to stirring of the soil amongst Pelargoniums, Calceolarias, &c. Plant annuals and sow for autumn bloom. Stake perennial and other tall-growing plants as they advance in growth.

Fruit (Hardy).—Thin and nail in the shoots of Peaches and Nectarines, leaving as little wood to be removed at the winter pruning as possible; thin the fruit to about one foot apart in a general way; but on strong vigorous growing trees they may be left much thicker, whilst on weak growing trees they should be left much farther apart. By this means the weak growing trees will have a chance to make stronger woods, and the luxuriance of the more vigorous growing trees will be checked. Thin the fruit of Apricots, and stop and thin shoots. Net Cherries from birds. If any caterpillars appear on the Gooseberry bushes, dust them with white hellebore immediately; this will effectually stop them. Thin the shoots of Figs, and do not on any account either stop or lay in the shoots that are left. Secure the young shoots of grafts.

Greenhouse (hard-wooded).—After the middle of the month all the large specimens of the stronger growing and more hardy plants, such as Acacias, &c., should be placed out of doors in rather a sheltered, shaded situation. All the tenderer and more delicate kinds should remain in the house. The young stock ought to have the protection of a cold frame, or pit; they should have plenty of air, and should be slightly shaded in very bright weather; water in the afternoons. Shift any plants that require it. *Soft-wooded Plants.*—These must not be allowed to suffer for want of water; they will now be commencing flowering, and should have more air.

Hollyhocks.—Stake and securely tie the spikes as they start for bloom. If dry weather sets in, keep them well watered after mulching, *i.e.*, placing some half rotten manure round each plant.

Kitchen Garden.—Thin all crops that require it, and hoe deeply among them, leaving the soil light and porous. Sow Peas for late crops; sow Lettuces, Radishes, and Spinach for succession; sow French Beans and Scarlet Runners; sow Endive, Turnips, and Coleworts. Plant out Celery in well prepared trenches; plant Leeks; plant out Broccoli of sorts, Brussels Sprouts, Savoys, &c. If ground be limited, Brussels Sprouts and Borecoles may be planted between the rows of early Ash-leaved Kidney Potatoes, and the sooner they are planted the better. Plant Cauliflowers and Lettuces for succession.

Melons.—Keep up a regular bottom-heat to late crops by renewing the linings Do not let the foliage get too crowded, and let the fruit have the sun. Water late crops, but those with fruit approaching maturity should not have any.

Orchard House.—Go frequently over the trees to thin and stop the shoots; do not on any account retain too much, it is a very frequent and a very great mistake to do so. Thin finally all the fruit; and here also I would caution not letting too many fruit remain on the trees. Give air freely, and water liberally with liquid manure. Syringe daily, to keep down red spider.

Peach-forcing.—Keep a drier atmosphere and give more air in the early houses, but in the late ones maintain a moist warm atmosphere. Water inside borders liberally; give air early and abundantly in the forenoon; shut up early in the afternoon, syringing the trees well at the same time, and well wetting the paths, borders, &c. Keep down insects.

Pansies.—Propagating should now have especial attention. Healthy cuttings strike readily in a shady border. Procure seed as often as it can be gathered in a ripe state.

Pelargoniums.—Here will be much to do as regards seedlings and new varieties, in comparison with the old. Careful shading and watering will prolong the bloom, but in other respects there is not much to be done before the general cutting down.

Pinery.—Give the plants regular supplies of water; fruiters may have liquid manure every other time, and the young plants occasionally. Syringe every afternoon, excepting any in bloom. The young plants will now be growing freely; those not shifted last month should now have larger pots; the roots should never become very matted before they are shifted. When potted they should be kept rather close, and slightly shaded for a few days; afterwards, they should have all the light and air possible.

Pinks.—This month is *the* month for Pinks. Both blooming and propagating must have good attention, and both is perfectly easy if set about in a proper manner, and at the proper time.

Pleasure Grounds.—Attend to the regular routine.

Stove.—Guard against thrips and red spider, which, if not well watched, will soon increase on many stove plants. Do not stint any for pot room, and do not on any account let any of the plants stand too close together. Syringe plants not in flower and keep everything perfectly clean.

Roses.—The check vegetation has received during the last month has been so favourable for the increase of the aphides and Rose maggots, that more than ordinary vigilance must be exercised to keep them in check. So soon as the blossom buds are formed, liquid manure will be found very advantageous in increasing the size of the blossom.

Strawberries.—In order to have good plants for early forcing next season, runners should be layered in small-sized pots as soon as possible; one, or at most two in a pot, is quite sufficient.

Tulips.—Collections growing in some localities will be ready for lifting by the latter part of this month. The bloom has been short-lived when not protected from an early time. Many beds have been failures this season, others have been altogether fine. We shall review the bloom in our next. For the present we recommend the perusal of the meeting of the Royal National Tulip Society, given in the present number.

Vinery.—After the fruit is gathered from the first houses, the greatest care must be taken to keep the foliage in as green and healthy a state as possible. Keep the house containing ripe fruit dry, and give abundance of air. Grapes that are colouring should have plenty of air; attend to later houses, and keep fire heat while in bloom.

RHODODENDRON [illegible]

(PLATE 113.)

T[illegible]e Rhododendron is one of a numb[illegible] of rem[illegible] spec[illegible] dis[illegible] in Assam and B[illegible]tan by Th[illegible] J. Booth, [illegible] introd[illegible] by him to Eng[illegible] [illegible]s. The one we now [illegible] s blo[illegible] of this pres[illegible] [illegible]h Mr. Fairie, of Liv[illegible] ssrs. [illegible], Henderso[illegible] [illegible] Road—an enterp[illegible] —ha[illegible] purchased th[illegible] [illegible] these Rhododer[illegible] Mr. B[illegible]th, which [illegible] [illegible] and be[illegible] with, we [illegible], prove equal, [illegible] [illegible] splendid species [illegible]e tribe, introdu[illegible] [illegible] Hooker, some [illegible]ading R. [illegible] have already [illegible] his e[illegible] [illegible] [illegible]e present [illegible] [illegible]mongst [illegible] [illegible] [illegible] Bhotan [illegible] are [illegible] most w[illegible] [illegible] [illegible]ance. [illegible]stinc[illegible] [illegible]ears of a[illegible] [illegible] [illegible] [illegible]s of [illegible]s. We [illegible] [illegible] [illegible] [illegible] Mr. [illegible] Dr. Josep[illegible] Hooker, for having [illegible] our [illegible]ens w[illegible] se magnifice[illegible] [illegible]atives of the Indian [illegible] [illegible]nsider[illegible] [illegible]e many great [illegible]ts which yet rem[illegible] Bhotan, Cash[illegible], and adjac[illegible] [illegible]tricts, we are surprised that [illegible] our [illegible]erprising nurse[illegible] have thought it worth their [illegible] [illegible] [illegible]or [illegible] [illegible]e of procuring the [illegible] [illegible]s yet [illegible] beyond [illegible] [illegible]haunts. Those [illegible] re[illegible] who ha[illegible] [illegible] have se[illegible] work[illegible]e plan[illegible] [illegible] [illegible] [illegible]gs hea[illegible] [illegible] [illegible] [illegible] [illegible]ea of [illegible] [illegible] [illegible] [illegible]

RHODODENDRON HOOKERI.

(PLATE 115.)

THIS fine Rhododendron is one of a number of remarkable species discovered in Assam and Bhotan by Thos. J. Booth, Esq., and introduced by him to English gardens. The one we now figure has bloomed this present spring with Mr. Fairie, of Liverpool. Messrs. E. G. Henderson, of Wellington Road—an enterprising firm—have purchased the entire stock of these Rhododendrons from Mr. Booth, which includes twelve species, and which will, we doubt not, prove equal, if they do not surpass, the splendid species of the same tribe, introduced from Sikkim by Dr. Hooker, some of which, including R. Edgworthi and Dalhousiæ, have already flowered in this country. We are told respecting the present group, that amongst these brilliant discoveries from the Bhotan Alps are the most wonderful sized flowers, delicious fragrance, and distinct colours of any that are known to exist in this gorgeous tribe of plants. We are therefore the no less indebted to Mr. Booth than to Dr. Joseph Hooker, for having enriched our gardens with these magnificent natives of the Indian Alps.

Considering the many grand plants which yet remain in Bhotan, Nepal, Cashmere, and adjoining districts, we are surprised that none of our enterprising nurserymen have thought it worth their while to send a collector for the purpose of procuring the many treasures yet unknown beyond their native haunts. Those of our readers who have been fortunate enough to have seen the splendid work on the plants of Nepal and Cashmere, edited by Dr. Hooker, from drawings made on the spot by Lieut. Cathcart, will be able to form some idea of the magnificent plants yet to be introduced, and whose value will be additionally enhanced by the fact that they may be expected to prove hardy. It is not more than 20 years ago when nothing but R. ponticum, catawbiense, and maximum worth naming, were cultivated in this country; and these, though very valuable introductions at the time (and useful plants still), possessed but a poor variety of colour, the prevailing tints being a dull or rosy purple. By crossing these with the scarlet-flowered arboreum from Nepal a strain was obtained having scarlet flowers but retaining the tender habit of their Indian parent. This progeny was again crossed with hardy kinds, and so up to the present day, when our collections (as may be now witnessed, and to which our pages this month amply refer), present us with every intermediate shade of colour between intense scarlet, rich purple, and down to a pure white, produced on plants in every respect hardy. This great triumph of the hybridiser's art has already produced a great improvement in our gardens; and from the quantities which are annually raised by the great growers of

American plants, the demand for them must be great. Amongst the many names of those who have been successful raisers of hybrid Rhododendrons, are Mr. Burn, of Tottenham Park, Wilts, whose display of his own seedlings at Tottenham is worth visiting; Mr. Carton, late of Highclerc, Hants, who raised many magnificent varieties, some of which may now be seen. (Mr. Carton was warmly supported in this branch of gardening by J. R. Gowen, Esq.) Messrs. John and Hosea Waterer, of Bagshot and Knap Hill; Messrs. Lee, Hammersmith; Messrs. Standish and Noble, Bagshot; Mr. Baker, and many others.

That the species now introduced will prove a valuable material in the hands of the hybridisers there can be no doubt. But very few of our present hybrids are fragrant; the Bhotan as well as some of the Sikkim species are deliciously so, and this fact, we know, is not escaping the notice of these indefatigable cultivators; we may therefore expect, in the course of time, to see the size and colour of these Asiatic species added to the habit of plants now in common cultivation; and, to crown the whole, with their exquisite fragrance too.

TEDWORTH HOUSE, WILTS.

(Continued from page 170).

THE kitchen-garden at Tedworth is, as may be supposed, extensive, and, besides a large breadth of vegetable and fruit ground, contains a number of forcing-houses;—Pines, Peaches, Grapes, Plums, Cherries, and Apricots are forced here in large quantities. The houses in which these fruits are grown are principally of the lean-to description, and have mostly been erected by Mr. Sandars. We need hardly remind our readers that Mr. Sandars has for many years paid great attention to fruit culture, and is the author of a very useful little work on the culture of the Vine, which contains the result of his experience, as practised at Tedworth, and of which Mr. S. informed us he was preparing a second edition. To return to our subject:—there are several houses devoted solely to Grapes (which are supplied throughout the year), two large Peach houses, and a range, in two divisions, for Plums, Cherries, and Apricots, besides Pineries, and a great number of pits, &c. The earliest crops of Grapes are furnished by Vines in pots, of which a large number are grown; at the time of our visit (the third week in May), one crop had been cleared and a second was then ripe, among which were some very excellent Muscats, quite ripe. We next found a house filled with Black Hamburghs, about half swelled. These Vines have borne heavy crops for more than twenty years, and are still very vigorous, as their wood and luxuriant leaves bore witness, and produce very superior fruit. Mr. Sandars thins out his bunches more than is usually done, aiming at having large berries, some of which, he informed us, he has measured in past seasons, and found to be five inches in circumference, and we have no doubt that this season

some of them will be equally large. There are two houses exclusively devoted to the Muscat Grape, which is a great favourite with Mr. Assheton Smith. The border, in both houses, occupies the body of the house, excepting the path along the back. The Vines are planted in the middle of the house, two together—one being trained downwards towards the front, and the other towards the back. In one of the houses the Vines have been planted many years, and, notwithstanding that their roots are confined within the limited area of the interior of the house, produce large crops of fine fruit, and the Vines were growing vigorously. This fact should teach us that Vines may be kept for years at the highest pitch of health and productiveness with a very limited space for their roots, when well managed in other respects. The second house of Muscats is planted and trained in a similar manner; but in the case of these, as the house was larger and the Vines had more room to grow, he has allowed them to pass through the arches of the front wall to a narrow border outside. Nothing can exceed the health of these Vines, nor the quality of their produce. Respecting the economy of planting Vines so thick as Mr. Sandars does, as compared with the ordinary practice of one to a rafter, we are of opinion that for Muscats, and perhaps one or two other kinds of Grapes, this plan has its advantages, as we think heavier crops can be obtained under a given space of glass, than where one Vine only is planted. As to the advantage of having the principal part of the roots of Muscats within the house, there is, in our mind, no doubt whatever, as in this case the roots are under the direct control of the manager. If we remember correctly, the late Mr. John Wilmot was of opinion that for Muscats, planting thick, allowing a limited space to each Vine, and taking five, or six, or eight bunches from each, was the best plan of securing heavy crops; and we recollect seeing, a few years back, several houses planted in this way at his establishment at Isleworth. The house to produce the last Grapes, which are retarded until the early Grapes come in, is planted with Barbarossa—a variety now admitted to be very valuable as a late Grape, as we have noticed in a separate article in our past volumes. These are turned outside the house after the fruit is cut, and the house is occupied by a variety of forced articles, while the Vines are having their winter.

There is one point respecting the mode by which Mr. Sandars keeps his late Grapes which deserves special notice. The Grapes, when ripe, are not permitted to remain on the Vines; Mr. S. considering that when once the fruit is ripe, it can be better and more economically preserved, when cut and kept in a suitable room, than by letting them remain on the Vines. His practice is, therefore, with the last houses of Muscats, &c.—say towards the middle of December—to cut the fruit with the wood attached to the bunch; the cut end of the shoot is closed over with sealing-wax, and the bunches are taken to a dry and dark room, where they are suspended from the ceiling on rods which are placed across the room, and on temporary tressels: the bunches must on no account touch each other, and will require looking over once in a week, to remove any berries which may happen to get mouldy among them. Mr. Sandars informed us he has practised this for years, and keeps the Grapes without shrivelling, and in very good condition for the table, until the beginning of the March, by which time

the early forced Grapes are ripe. There can be no doubt that after Grapes are once ripe they will keep better when cut in the manner described and hung in a dry dark room where a uniform temperature of something like 40° can be maintained, than when allowed to remain on the Vines. The great drawback to keeping Grapes through the winter is damp and the action of the sun's rays, which, by exciting a circulation in the sap of the Vines, tends to produce decay in the ripe fruit. We were ourselves forcibly reminded of this at the end of last February with a house of the St. Peter's. The mild warm weather of that month put the sap in rapid motion, and we found it even exude from the berries, which rapidly decayed in consequence. Now, had these Grapes been cut previously, and kept according to the plan of Mr. Sandars, this would not have happened, and the Grapes would, we doubt not, have kept till the end of March. The economy of the system must be obvious to all; the expense of firing houses with retarded Grapes is great, particularly in wet weather, as air must be given largely at the same time, and this expense is increased when, as often is the case, only a few Grapes are left, as they are just the same trouble. We need not say, as an additional recommendation, that when the fruit is cut the house can be used for a variety of purposes, which would be impossible when it contained the fruit. As the best plan for fruit rooms is now often discussed, we hope a dry compartment for the above and other similar purposes will be connected with it, as one of the most useful garden structures which could be built where fruit has to be kept, and which no good garden should be without.

The Peach houses are of the usual lean-to form, the trees being trained close under the glass. We found fine crops, and were pleased to see the White Nectarine successfully grown with others. On one side of the Melon ground is the range devoted to Cherries, &c.; this is likewise a lean-to erection; Cherries occupy the back wall. A semi-circular trellis runs along in front, on which are trained Plums, Cherries, and Apricots; one division had been cleared of the Cherries, while the Plums and Apricots were progressing; the trees are all planted permanently, and nothing could exceed their health, and we never saw finer fruit; the Royal Duke, Churchill's Heart, Bigarreau, and Elton were particularly fine. We have purposely noticed the forcing houses being of the common lean-to form, as we are convinced that for early forcing they are much superior; and as Mr. Sandars' Cherries, &c., have been hard forced for several years, and the trees are now as healthy and productive as they can possibly be, we think the planting the above fruits permanently to remain in the houses much preferable and far less trouble than growing them in pots, as is usually done. The Pinery was well filled with plants; many of the fruit had been cut, as Pines are chiefly in demand here during the season from November to April, but a number were swelling off for the summer.

Forced Asparagus is in great demand here throughout the winter; the beds are planted in the open ground, with a trench three feet wide between each; these are filled with a mixture of leaves and stable dung a month or so before the crop is wanted, which excites the roots to action, and the beds at the same time are covered with a span-roofed

glass frame about one foot high on the side, with arrangements for giving air and cutting the grass. By this process Asparagus is obtained of excellent quality and with little trouble. Glass frames have this advantage over wooden ones: they admit light, and the grass has in consequence the green colour and flavour of out-door produce. The beds are forced each alternate year, and have been now worked for 20 years, and appear as strong and as good as four year old beds. Mr. Sandars informed us he allowed the dung to remain between the beds the year they rested, which materially helped the beds, and he did not find cutting the roots away where the trenches were cleared out for forcing at all injure the plants, as the fact of their lasting so long sufficiently demonstrates.

We have overrun our space, and some other notes we made must stand over, and we cannot conclude without thanking Mr. Sanders for his kindness in imparting to us the many interesting points in his practice.

ROYAL BOTANIC SOCIETY, REGENT'S PARK.

MAY 28.—This, the first exhibition of this Society this season, was in every respect first-rate. Generally, however, the plants were the same as those exhibited at the Crystal Palace on the 24th, and which were fully described by us in our last number. No prizes were offered for fruit on this occasion, and as a matter of course none was shown. The number of new plants was also very limited. Azaleas, pot Roses, Orchids, and Pelargoniums were fresh and most gorgeous. Mr. Beck changed places with Mr. Foster on this occcasion with Pelargoniums, Mr. Foster being first at the Crystal Palace, but second only here. The prizes generally were taken by the same exhibitors as at the Palace. Florists' flowers in a cut state were far from being plentiful; there was, however, a fine collection of Tulips, 72 blooms, embracing many of the leading kinds. Pansies were not good; the only collection well coloured was from Mr. James, of Isleworth. Seedling Pelargoniums consisted of Viola (Hoyle), Matilda (Hoyle), Rose Raglan (Hoyle), Conspicuum (Turner), Mr. Hoyle (Turner), Carminatum (fancy), Emperor (ditto), Helen Faucit (ditto). The few new plants shown were contributed by Messrs. Veitch, Messrs. Henderson, and Mr. Linden. Mr. Barnes, of Bicton, sent cones and catkins of Araucaria imbricata. The afternoon, unfortunately, was wet, preventing many from enjoying one of the best, if not the best exhibition of the season.

JUNE 18.—This, the second show, was very successful, both as regards the collections of plants and company. The day was very fine. On this occasion there was the additional attraction of fruit, and the wonderful exhibition of American plants alluded to elsewhere. There were not so many large specimens of stove and greenhouse plants perhaps as we have formerly seen, but what were shown were generally well flowered and fresh. Pot Roses were not so good as they were last month, and the out-door Roses, being late, this beautiful class of flowers was by no means strongly represented.

Large collections of stove and greenhouse plants came from Mr. May,

gardener to H. Colyer, Esq., of Dartford, to whom the first prize was awarded. Among them were Dipladenia crassinoda, beautifully flowered; Ixora javanica, with abundance of orange coloured blossoms; some huge specimens of Aphelexis, Epacrises, and Pimeleas; Rondeletia speciosa in full growth and well flowered; the pale yellow Allamanda grandiflora, and a large bush of Dillwynia clavata. Next came Mr. Taylor's collection from Streatham. It contained Adenandra fragrans; Aphelexis spectabilis grandiflora, literally a ball of blossoms; Pimelea hispida, and Ixora coccinea. Mr. Peed showed Cyrtoceras reflexum, in good condition; Epacris miniata, two well flowered Azaleas, and Pimelea Hendersoni. Of other plants in this class Mr. Barter had Roella ciliata, covered with handsome blue blossoms; Dipladenia crassinoda, Statice arborea, and Allamanda grandiflora, from the same exhibitor, were also excellent specimens of good cultivation. Of groups of 16 plants the above may be said to have been the cream. In the Nurserymen's Class of 12 Stove and Greenhouse Plants the first prize was awarded to Mr. Cutbush, of Barnet, in whose group were beautiful bushes of Aphelexis, Polygalas, Heaths, and Statices. Messrs. Fraser had Statice Holfordi, Pimelea Hendersoni, Rhynchospermum jasminioides, and the bright red-flowered Azalea refulgens.—In collections of 10 Stove and Greenhouse Plants, Mr. Carson, gardener to W. F. G. Farmer, Esq., had an excellent Mussænda frondosa, covered with large white floral bracts, in which the beauty of the plant resides; two Everlastings, two Allamandas, two Polygalas, and two handsome Azaleas. Mr. Green sent Epacris miniata, beautifully flowered, and certainly the finest plant in his collection. Mr. Green also showed Allamandas, Azaleas, and Everlastings. Mr. Dods' collection contained Phænocoma proliferum in good condition, and Aphelexis humilis rosea, a fine kind with large showy blossoms. Among Mr. Morris's plants were Hoya imperialis and campanulata, the latter with numerous bunches of greenish-yellow saucer-shaped blossoms. — Stove and Greenhouse Plants, in sixes, came from Messrs. Roser, Williams, Morris, and others. Among them were Aphelexis macrantha purpurea, Erica Cavendishi, Eriostemon buxifolium, Abelia floribunda, a handsome greenhouse shrub; Ixora coccinea, and Stephanotis. Mr. Hamp showed Relhania squarrosa, a plant with bright yellow Chrysanthemum-like flowers, and Mitraria coccinea.

Tall Cacti were shown by Mr. Mortimer, in whose group we remarked the white Cereus crenatus, and Mr. Green; and a beautiful seedling, a cross from Cereus speciosissimus, came from Mr. Davey, of Colney Hatch. Each petal was of a beautiful violet colour with a rib of red down the centre.

Orchids were not very numerous. In groups of 20, Mr. Gedney, of Hoddesdon, was first; it contained the seldom seen Galeandra Funcki, Lycaste Skinneri, beautifully flowered; Phalænopsis, Cattleya Mossiæ, Harrisoniæ, and superba, the latter a very handsome crimson, with yellow-streaked lip; Calanthe Masuca, and Aerides maculosum. Among Mr. Woolley's plants, which stood next, were Dendrobium transparens, a small-flowered species but extremely pretty; Barkeria spectabilis; Cattleya intermedia and superba, the latter with two blooms on it; Sacrolabium guttatum, the white Phaius, and Sobralia

macrantha; the last was better flowered than ever we remember to have seen it. Orchids in groups of 12 plants came from Mr. Keel, gardener to J. Butler, Esq., of Woolwich, who was first. His collection contained Cattleya Mossiæ and aurantiaca; Dendrobium tortile, with sulphur-coloured trumpet-shaped lip; and Lælia cinnabarina. Mr. Clarke, of Hoddesdon, had Epidendrum macrochilum, with large white lip stained with purple; Phaius Wallichi and Oncidium stramineum, the last more rare than beautiful.—In collections of six Orchids, Mr. Grix, gardener to A. Palmer, Esq., of Cheam, was first. His group contained a large and fine Aerides odoratum, also A. crispum, a mass of flower. Mr. Carson showed Dendrochilon filiforme, with long tails of green blossoms; Saccolabium Blumei, which is one of the handsomest of the genus; and Cypripedium barbatum superbum. Mr. Dods had Anguloa Ruckeri, two beautifully flowered Stanhopeas, especially S. tigrina, and Cattleya Mossiæ. Mr. Morris sent Acineta Humboldti, Maxillaria tetragona, and the deep brown and purple-flowered Epidendrum Hanburyanum, a distinct-looking kind, which is not so common as it ought to be.

To Roses in pots we have already referred. They came from Messrs. Lane and Francis. Mr. Lane's Persian Yellow was fine, and so was his Miss Glegg. Some other kinds, such as Paul Perras, Duchess of Sutherland, Louise Peyronney, Great Western, and Souvenir de Malmaison were also "well done." Mr. Paul had some boxes of cut blooms; but in the crowded state in which the tents were, we could not get near enough them to closely inspect them.

Cape Heaths were shown in good condition. Among the different varieties were tricolor Wilsoni and other sorts belonging to that class; metulæflora, denticulata moschata, depressa, ventricosa grandiflora, Cavendishi, propendens, Bergiana, mutabilis, ampullacea, gemmifera, and tortiliflora.

Of plants having fine foliage Mr. Parker and Messrs. Henderson sent collections, in which were Ferns, some pretty Lycopods, including L. Martinsi, the variegated Hydrangea, Caladiums, Rhopalas, and variegated Orchids. The plants composing these groups were, however, for the most part, small, and therefore made but little display.

Ferns were shown by Mr. Fletcher and others. Among them were Woodsia Ilvensis, Hymenophyllum Tunbridgense, and other rare kinds. Their arrangement was judicious and good, and the eye, tired with looking at gayer objects, turned to these inhabitants of our woods and glens with delight.

Pelargoniums were good and numerous, and formed one of the chief features of the day. Mr. Turner was first for twelve finely grown and well bloomed plants; they were Sanspareil, Lucy, Astrea, Governor-General, Painter Improved, Esther, Enchantress, Virgin Queen, Carlos, Queen Eleanor, Rowena, and Leonora. Messrs. Dobson sent the next best collection. These were large, finely grown plants, but thin of bloom. The finest plants in this collection were Arab, Delicatum, Astrea, Painter Improved, Fidelis, and Arethusa. Messrs. Fraser, of Lea Bridge; Mr. Gaines, of Battersea; and Mr. Cutbush, of Highgate, exhibited in this class, and were awarded prizes in the order

they are given.—For collections of 10 plants, private growers, Mr. Nye, gardener to E. Foster, Esq., Clewer Manor, was first, with a select lot of plants, some of which were exceedingly well bloomed. Attraction, Golden Fleece, Enchantress, Carlos, Purple Perfection, and Serasikier, were very fine. Mr. Holder, gardener to the Rev. E. Coleridge, was second: these were large plants, of good kinds, but a little drawn. Mr. Windsor, gardener to A. Blyth, Esq.; and Mr. Weir, gardener to J. Hodgson, Esq., sent ten plants each, but they were indifferently flowered. The most interest attaches to the class of six plants, new varieties, open to all growers; we therefore give the whole of the names. 1st, Mr. C. Turner, with Snowflake, Wonderful, Lord Raglan, Phaeton, Omar Pacha. and Admirable; 2nd, Mr. Nye, gardener to E. Foster, Esq., with Wonderful, Saracen (these two were very fine), The Clipper, Edith, Sparkler, and Phaeton; 3rd, Messrs. Dobson, with Wonderful, Conqueror, Gem of the West, Fandango, Mr. White, and Commander-in-Chief; 4th, Mr. Gaines, with Eugenie Duval, Feu Follett, Wonderful, Raphael, Argus, and James Odier. The Gem of the West in Messrs. Dobson's collection was very fine. Mr. Gaines's plants were one and all poor in the extreme. It will be seen that one variety, namely, Wonderful, was in all four collections. Fancies were never seen so fine before. The best six, sent by Mr. Turner, were covered with bloom, and good blooms too; four of the plants were very large: they consisted of Celestial, Evening Star, Lady Hume Campbell, Criterion, Perfection, and Erubescens. Messrs. Fraser, Mr. Gaines, Messrs. Dobson, and Mr. Cutbush also contributed to this class. There were also the same number of amateurs who exhibited fancy varieties. Mr. Bousie, gardener to the Hon. H. Labouchere, M.P., Stoke Park, was first; Mr. Windsor and Mr. Bray sent very good collections. Mr. Thompson, of Barnet, sent four very large plants of the old free-flowering kind, Princess Marie Galitzin. It is a good grower, but by no means an attractive variety. These plants created quite a sensation from their immense size; but when we consider the large pots they were grown in, they were nothing very wonderful, and being full of growth did not produce what is termed a "head" of bloom. The plant of Celestial in the first collection of six had as much bloom as the four put together, and this was in an eight-inch pot only.

Fuchsias were beautifully exhibited by Mr. Bousie, Mr. Bray, and others. Mr. Bousie's collection was very varied. It contained a well-bloomed plant of the white corolla variety, named Queen Victoria, figured by us last year.

Ranunculuses were shown very good by Mr. Tyso, of Wallingford.

Calceolarias were shown well by Mr. James. The sorts were Brunette, Fandango, Beauty, Marie, Commander-in-Chief, and Duchess of Northumberland. Of shrubby kinds Mr. Turner produced the following:—Eclipse, bright red; Hebe, yellow; Hawk, spotted yellow; Harlequin, spotted yellow and brown; Albira, a free flowering yellow, slightly spotted; and Orange Perfection, extra fine. Some good unnamed seedlings of the herbaceous class were shown by Messrs. E. G. Henderson, and some fine shrubby kinds by Mr. Turner, viz.;—King of

Yellows, a very fine dwarf yellow for bedding; King of Sardinia, the best dark; Orange Boven and Pilot were fine. Mr. Cole, of St. Albans, also sent some pretty varieties of this class.

Pansies were not good. Mr. Bragg was first; Messrs. Dobson, second. There were also two collections from Edinburgh, finely grown flowers, but had become damaged from the length of the journey. A pretty fancy kind, exhibited by Mr. Stark, of Edinburgh, named Mazeppa, we have seen years ago on the Continent, under the name of Magpie. It may be compared to some of our fancy Dahlias in its style of marking, being purple tipped with white. The white extends down each of the five petals in a three-cornered or wedge shape. There were some fine new varieties in Messrs. Downie & Laird's collection.

Seedling Pelargoniums were exhibited in large numbers by the principal growers, there being a large bank of them, some of which were great improvements on existing varieties. The first prize for the best scarlet kind was awarded to Mr. Turner for King of Scarlets. This is a very bright free flowering variety. The second prize was also awarded to the same exhibitor for Prince of Prussia, a bright flower, with large rich blotch on the top petals. It is a large bold flower. The judges selected the following for certificates:—Spotted Gem (Turner), the finest of all the varieties, having distinct spots on the bottom petals; Mr. Beck (Turner), another spotted kind; General Williams (Turner), a rich dark flower of good shape; Viola (Hoyle), pale lavender lower petals, dark top—a distinct new variety. The following were also good: Symmetry (Foster), a fine bright flower; Golden Fleece (Foster), very bright orange scarlet, exceedingly showy; Miss Foster (Turner), a dark flower with white centre, very free and attractive, but not of the finest form; Agnes (Hoyle), large rose with white centre; Standard (Hoyle), large Carlos-like flower, but of finer form; Bianca (Hoyle), resembling, but finer than Virginia; Marvellous (Hoyle), a free flowering dark variety with strongly veined bottom petals, very showy; Josephine (Hoyle), light purple; Mr. Hoyle (Turner), a showy spotted kind; and Conspicuum (Turner), a strongly marked and beautifully spotted variety. These two latter had certificates awarded them at the first show, May 28.

In Seedling Fancy Pelargoniums we noticed General Pelissier, Emperor, Helen Faucit, Sir J. Paxton, Madame Rougiere, King of the Fancies, and Jenny Ney; all of which were more or less good, and considerable improvements. The three first named received certificates.

There were some interesting new bedding plants exhibited. Mr. Turner sent a basket of the new variegated Geranium, Alma. This has smoother foliage than most of the variegated kinds, with bright scarlet flowers; it is also of good habit, being free flowering. A certificate was awarded to it; also to a new striped Petunia, Marquis de St. Innocent, exhibited by Mr. Turner: this is striped like a Carnation. There were also three seedlings marked in the style of Picturata, of very good shape—Gem, Picotee, and Nonsuch.

Mrs. Halford, a new white Verbena, was shown, very good, and is certainly the best of its class.

Mr. J. Salter, of Hammersmith, sent a collection of herbaceous Pæonies, which were exceedingly gay.

Mr. Field sent his free flowering Heliotrope, Miss Nightingale.

Messrs. Henderson, of Pine-apple Place, sent a small group of plants, the most remarkable of which was a finely grown plant of the sweet-scented white Bouvardia longiflora.

Mr. Cutbush received a certificate for a variegated variety of Shrubland Rose Petunia. It is curious, but not very showy.

The best of Cole's seedling shrubby Calceolarias were Model, Empress, Brilliant, and Nymph.

We also noticed the new double white Petunia, Imperial.

The fruit, as usual, excited a good deal of interest. There were upwards of 30 Pine-apples. The heaviest Providence weighed 8lbs. 10oz.; this was from Mr. Fleming, of Trentham, and obtained the first prize. The second prize was awarded to Mr. Gilham, for a finely formed and well finished fruit. There were several other good specimens, but they were either over or under ripe. The Queen Pines were very superior, and mostly from growers in Wales. Mr. Jones and Mr. Burn obtained the chief prizes for handsome fruits averaging 5 lbs. We observed a very good Lemon Queen from Mr. Jones which weighed 6½ lbs., but it was not nearly ripe, and therefore received no award.

The 1st prize for Black Hamburgh Grapes was justly awarded to Mr. Fleming; the bunches were not extraordinary for size, but they were finely coloured, and had large berries. There were seventeen exhibitors in this class, but none of the others passed mediocrity. Mr. Hill, gardener to R. Sneyd, Esq., had first-rate examples of Black Prince, which were rewarded accordingly. Mr. Turnbull had the best Muscats; they were, however, deficient in that fine golden yellow which they should possess when in perfection; but this perhaps must not be looked for in June. In the Frontignan class Mr. Forbes, of Woburn, was placed at the top, and in Muscadines Mr. Baillie and Mr. Clarke were equal. Mr. Turnbull exhibited three bunches of a seedling Black Grape, but the judges deemed it so like the West's St. Peter's as to make it no award.

The prize Peaches, as usual, came from Mr. Snow, gardener to Earl de Grey; the sort was Noblesse. Mr. Hill and Mr. Drummond were second with Royal George. In this class there were nineteen exhibitors and thirteen prizes awarded.

The Nectarines were generally very good and beautifully coloured. Mr. Davis, of Oakhill, was first, with Violette Hative; Mr. Ayres and Mr. Mitchell were good seconds with Elruge. Mr. Monro exhibited several boxes of this fruit. An extra award was made to Mr. Burn for an excellent dish of Apricots.

For Plums Mr. Fleming was 1st, with Goliath. In Figs there were five or six competitors; Mr. Snow and Mr. Richards were equal with "Brown Turkey." Mr. Bousie had very good May Duke Cherries, which were placed on a par with Mr. Fleming's Tartarians. Mr. Smith showed very superior examples of British Queen and Sir Charles Napier Strawberries, for which the judges gave an extra award. Mr. Bailey had good examples of Admiral Dundas, a new sort in the way of British Queen, but coarser. Among others shown were Sir Harry and Black Prince; these were stated to have been ripened out of doors.

Of Melons there was a fair display; Mr. Ruffett and Mr. Bailey obtained first prizes for Hybrid Greenflesh sorts; and Mr. Dawson was first for a Scarlet Hybrid. No second or third prizes were awarded for Scarlet-fleshed sorts, as they were very deficient in flavour.

Among Miscellaneous Fruits were Plum trees in pots from Mr. Fleming; on one tree of Jefferson, about two feet high, were a dozen of fruits. Mr. Tillyard had a nice dish of White Currants; there were also Strawberries in pots from Mr. Drummond. They were British Queens and extremely well flavoured.

LIGHT: ITS INFLUENCE ON VEGETATION.

HAVING in my last expressed an opinion that where the highest points of cultivation were aimed at, structures specially erected for growing plants would be adopted, in which all the requirements of light, heat, and ventilation could be afforded them, I may notice, as regards the materials of which plant houses and pits should, in my opinion, be constructed, that nothing so well complies with all the wants of the cultivator as metal framework glazed with a good quality of sheet glass, and I consider these materials cheapest in the end; and as metal bars may be made very slight in comparison with wood ones, the squares of glass need not be so large, whereby a saving is effected when repairs are wanted; and besides the sashes are really stronger, and there is less danger from breakage than with wooden ones. It is true more shading may be considered necessary—which is, however, not true in the abstract, as I shall notice hereafter.

It is in the early spring, when the annual growth of most plants commences, that the influence of light is of most importance in producing short joints and healthy leaves, and again during autumn, when the ripening of the wood has to be completed, that the advantages of metal frames, as compared with wooden ones, are made manifest. As regards the opinion on shading offered above, I may observe that plants grown under a free exposure to light from early spring are better able to withstand the brilliant light of a summer's sun than when they have been grown with a less share of it, and consequently do not require more or thicker shading than the latter, by reason of their having been accustomed to more light during their growth; the same amount of shading will therefore affect both in an equal degree.

That some plants are more susceptible than others of the influence of light is obvious enough, from an inspection of plants growing in a natural state. On this point let me quote what Dr. Lindley has to say on the subject:—"The capability of plants to bear the action of direct light varies according to their specific nature. One species is organised to suit the atmosphere of a dense wood into which diffused light will only penetrate; another is planted by nature on the exposed face of a sunburnt rock, upon which the rays of a shadeless sun are daily striking; in these cases the light which is necessary to the one would be destructive of the other. The organic difference of such species

seems to consist chiefly in the epidermis, which regulates the amount of perspiration. It is, therefore, to be remarked that it is not the greatest quantity of light which can be obtained that is most favourable to the healthiness of plants, but the greatest quantity they will bear without injury."—(*Theory of Horticulture, p.* 79.) As examples of plants commonly cultivated, I may notice that the Calceolaria, Cineraria, and Pelargonium quickly draw and become yellow in the leaf when not placed near the glass in houses, while the Camellia and many other plants do not suffer in the same degree, and in fact grow best in a partial shade.

But the effect light exercises on the functional power of plants is most strikingly shown when the period for blooming arrives. For as the great object of the plant's economy is the reproduction of itself by seed, preceded by the opening of the petals or flowers, which it is the cultivator's object to produce in the greatest quantity, it follows that in proportion to the activity of the secretory organs stimulated under free exposure to light, so will be the number and brilliancy, or pureness of colouring of the flowers, as the case may be. I frequently observe what a difference exists in the size and colour of the flowers of plants of the same kind; one shall have its colours, whatever they may be, clear, distinct, and brilliant as compared with the dull muddy colour of the other. This marked difference is to be accounted for by the explanation given above, and forms a point of great importance in plant cultivation.

(*To be continued.*)

PROTECTION OF FRUIT TREES.

In the last number of the *Florist*, your correspondent, Mr. G. Fry, alluding to a statement of mine at page 106, where I said I hoped to have the pleasure in a few weeks of thinning many quarts of young fruit, asks, "Has this been verified?" I reply, yes, it has; even better than I anticipated. Never have I seen so many Apricots set before. The Apricot crop is, as far as I can learn, an average one this season in Yorkshire. Peaches and Nectarines are also a very good crop with me. Pears on the wall trees, a fair crop; on standards, thin, owing more to the wet than the frost. Plums, thin, also owing to heavy showers; Apples, a fair crop; Cherries, above an average; Gooseberries, Currants, Raspberries, and Strawberries, most abundant crops.

In the *Gardeners' Chronicle* of June 7th Mr. Fry will see a communication from a person who signs himself "G. A., Leytonstone, Essex." This person ("G. A.") says that he always used coverings for his Apricot trees, but that six years out of seven he failed to obtain crops, so this year he determined to do without covering, and the result is he has a most abundant crop of fruit. I merely quote this correspondent's communication to show Mr. Fry that though he may have failed to get a crop of Apricots, there are persons nearer to him than I am who do, and that without protection.

My time has been lately, and is now, much taken up with some extensive improvements that are being completed here, so that my reply to Mr. Fry is in consequence brief; but I could not let it pass unnoticed lest my silence may be misconstrued.

Stourton. M. SAUL.

MESSRS. WATERER AND GODFREY'S EXHIBITION OF AMERICAN PLANTS.

THE above firm, so well known for their extensive collection of American plants, as well as for hardy nursery stock, have this season an exhibition of the former at Ashburnham Park, Chelsea, arranged in a series of beds, under a very spacious tent. The beds are well arranged for filling the space and showing off the plants to the best advantage. A gallery runs across the upper end, and the view from this, looking over the various groups with the colours well mixed, has a striking appearance, and would alone repay a visit to the exhibition. The plants consist of Rhododendrons, Azaleas, Kalmias, and a few others. Many of the specimens are large and well bloomed; the object has been rather to show what effect good varieties of American plants will produce when planted in masses than merely a display of rare sorts, of which in the nursery at Knap Hill they have a large stock, and no one can have visited the exhibition without being impressed with the great value of these plants for the decoration of country residences.

Among some of the more striking varieties we noticed Atrosanguineum, a good old sort, of a dark crimson; Archimedes, bright rose; Brayanum, vivid scarlet, a first-rate kind; Currieanum, a late blooming sort, of a lilac colour; Delicatum, blush, pretty; Fastuosum, a double variety, with lilac flowers; Hogarth, rosy scarlet, fine; Nero, dark rosy purple; Pelargoniflorum, rose, with distinct spots; Cato, rosy blush, very fine; Catawbiense elegans, a beautiful light variety; C. grandiflorum, blush, a fine truss; C. delicatissimum, ditto, changing to white, very fine; C. roseum grandiflorum, C. grandiflorum: these two are splendid varieties, with large trusses, and bloom freely, as are C. roseum elegans and C. roseum pictum, which, like the above, were covered with bloom; C. hyacinthiflorum, a double kind, distinct; C. Everestianum, a good old light variety. The hybrids from R. catawbiense and ponticum are, many of them, extremely beautiful, and as the plants are hardy, and will grow in almost any soil; and besides, blooming late they are the sorts to select for extensive planting. The other hybrids, including the scarlets, are more brilliant in colour, but scarcely grow so free except in suitable soil. We noticed some fine plants of Kalmia latifolia 7 or 8 feet high and nearly as many through; with a good sprinkling of Azaleas. The bringing of these collections together is a good opportunity for country gentlemen and gardeners to select for themselves.

NATIONAL FLORICULTURAL SOCIETY.

JUNE 12.—The Rev. J. DIX in the chair. The following are the awards of the censors, Messrs. Parsons, Keynes, Cook, Andrew Henderson, T. Moore, and Robinson, who furnished the following report:—First Class Certificate to Pelargonium Viola. Habit first-rate, truss well arranged, formed by four to five pips; form good, size full, substance good, upper petals deep plum maroon, with margin of pale lilac; lower petals pale lilac, throat white, colour new, and general good qualities. From G. W. Hoyle, Esq., Reading.—First Class Certificate to Pelargonium Spotted Gem. Truss of five pips, form first-rate, size full, substance good, colour bright rose, with beautifully defined spots of dark crimson maroon; throat white. From Mr. C. Turner, Slough.—First Class Certificate to Fancy Pelargonium Warrior. Truss five to six pips, form good, size full, substance thin, upper petals rich carmine, lower petals mottled and veined with same colour, throat white. From Mr. C. Turner, Slough.—First Class Certificate to Pansy, Duchess of Wellington. Form, size, and substance all very first-rate; colour, deep velvet purple upper petals, and broad margin of same on lower petals; yellow ground, eye well defined. From Messrs. Downie and Laird, Edinburgh.—First Class Certificate to Rose, Bacchus. Form good, size large, substance stout, rich glowing carmine crimson, foliage large, stout, and compact, of the Bourbon character; the three outer rows of petals very stout, large, and fine, remarkably smooth; centre petals small, well arranged throughout. From Messrs. A. Paul & Son, Cheshunt.—Certificate of Merit to Pelargonium, Matilda. Truss four to five pips, form of lower petals first-rate, upper petals somewhat deficient, full size and stout, bright salmon lower petals, upper petals margined with same, blotch rich crimson, throat clear white, a new and delicate colour. From G. W. Hoyle, Esq., Reading.—Certificate of Merit to Pelargonium, Standard. Habit good, truss four pips, flowers large, lower petals first-rate, upper petals somewhat deficient, colour bright rose lower petals, upper petals crimson maroon, throat white. From G. W. Hoyle, Esq., Reading.—Certificate of Merit to Pelargonium, Emperor. Truss four to five pips, form good, size average, substance medium, upper petals black maroon with scarcely a margin, lower petals deep carmine, veined; the colour of this flower is rich. From E. Beck, Esq., Isleworth.—Certificate of Merit to Pelargonium, King of Scarlets. Truss somewhat irregular, five pips; form and substance but medium, colour a near approach to scarlet, and for that rewarded. From Mr. C. Turner, Slough.—Certificate of Merit to Pelargonium, General Williams. Truss four to five pips, form and substance good, size full, upper petals rich black maroon, regularly margined with carmine; lower petals carmine mottled crimson, throat white, colours rich. From Mr. C. Turner, Slough.—Certificate of Merit to Pelargonium, Conspicuum. Truss five pips, stout, bright rose, with distinct and dense spots of maroon; in all, five petals; attractive. From Mr. C. Turner, Slough.—Certificate of Merit to Pelargonium, Prince of Prussia. Truss four pips, size large, substance

good, form middling, lower petals scarlet crimson, upper petals crimson maroon, margined with fiery crimson; throat bluish; colours rich. From Mr. C. Turner, Slough.—Certificate of Merit to Fancy Pelargonium, Helen Faucit. Truss five pips, form and substance good, size full, upper petals dense rich carmine, lower petals paler. From Mr. C. Turner, Slough.—Certificate of Merit to Fancy Pelargonium, Emperor. Truss five pips, form and substance good, size large, upper petals deep maroon margined with lilac, lower petals spotted with crimson, throat white. From Mr. C. Turner, Slough.—Certificate of Merit to Fancy Pelargonium, Carminatum. Truss four to five pips, form and substance good, size medium, rich bright carmine, with a well-defined throat of pure white. From Mr. C. Turner, Slough.—Certificate of Merit to Heliotrope, Miss Nightingale. Habit good, trusses large, and equally in bloom; light lavender, highly fragrant, improved truss, with well-expanded flower. From Mr. Field, Kensal New Town.—Certificate of Merit to Daisy, Annie Salter. Quilled white, deeply edged with rose. From Mr. Salter, Hammersmith.

The following subjects were also exhibited:—*Pelargoniums:* Bianca. A striking flower from the contrast of colours; the upper petals maroon, shading off to a narrow belt of purple near the edge, and bordered with another narrow zone of white; the lower petals white, almost imperceptibly tinged on the veins with purple. Exhibited by Mr. Hoyle. —Marvellous. Upper petals dark maroon, with narrow rosy edge; the lower, pink with crimson veins; throat white; in the way of Beck's Emperor. Exhibited by Mr. Hoyle.—Rose Raglan. A bold flower, but wavy; deep rose, passing to crimson in the upper petals, which have a moderate-sized dark veiny blotch.—Mr. Hoyle. The upper petals mottled pink, with very dark blotch, shading off to veiny crimson; lower petals also marked with smaller dark spots. Exhibited by Mr. Turner.—Hermione (Hocken). A free-blooming white of fair properties, the upper petals having a medium-sized veiny spot of crimson maroon. Exhibited by Mr. Turner.—Mr. Beck. Upper petals dark maroon, passing into crimson, and edged with rose pink; the lower, rose-pink with maroon spots. Exhibited by Mr. Turner.—Queen of the Fairies. A free bloomer; the upper petals blush with maroon spot, feathery, and passing into crimson towards its edge; the lower, with smaller crimson spots, from which two coloured lines extend to the base. Exhibited by Mr. Turner. *Fancy Pelargoniums.*—Sir J. Paxton. Upper petals maroon purple, white at the edge; the lower heavily marked with mulberry. Exhibited by Mr. Turner.—Mrs. Colman. Upper petals bronzy rose, with white border; the lower heavily marked with paler rosy purple; very free. Exhibited by Mr. Turner. Mr. Westwood, of Turnham Green, exhibited—Bijou. A variegated variety; the foliage grayish, edged with white and flaked with gray; flowers bright scarlet, with narrow upper petals. *Phloxes.*—The following was exhibited by Messrs. Downie & Laird, Edinburgh:—Countess of Morton. A tall overgrown variety, with bold foliage and pyramidal heads of bloom; flowers 1¼ inch in diameter; pure white, well formed, and of firm texture. Mr. Cunningham exhibited Oculata Cunninghami (inconveniently long in name). A variety of P.

Drummondi; bright pale rose, with a white feathered eye; cut blooms. *Calceolarias.*—From Mr. Oddy, of Epping, came—Count Cavour. A shrubby variety, apparently well suited for bedding; the flowers oval in outline, the upper lip large and closing the mouth, the colour clear bright yellow; cut blooms. Messrs. A. Henderson & Co., of Edgeware Road, exhibited—Brilliant. Herbaceous; flowers large, broader than long, well inflated, rich bronze, unequally marbled with yellow. From Mr. James, of Isleworth, were cut blooms of several bright-coloured spotted herbaceous varieties. *Verbena.*—Mr. Fozard, of Paddington, exhibited—Minnie. Rosy lilac, with dark red eye, and blotch of brighter rose at base of each segment; good truss; flowers large, the segments broad, rather wavy, but, except the lower one, without notches.

Registered Pot.—Mr. Thorniley, of Heaton Mersey, near Manchester, exhibited under this name a new garden pot, furnished with a shallow ledge-like trough on the exterior half-way down, with holes pierced through to the interior, the object being to more readily furnish moisture to pot-bound plants. The contrivance is not likely to become of general use.

The following Prizes were awarded:—Pelargoniums: 1st, Messrs. A. Henderson & Co., Pine Apple Place, for Magnet, Galatea, and Painter Improved. These were in bad condition. Fancy Pelargoniums: 1st, Mr. C. Turner, for Cassandra, Richard Cobden, and Erubescens; 2nd, Messrs. Henderson & Co., for Constance, Advancer, and Formosissimum. Calceolarias: 1st, Messrs. Henderson, for Agnes, Constance, Leopard, and Louisa. Mimuluses: 1st, Mr. G. Smith, for seedlings. Pansies in pots: 1st, Mr. Bragg, for Marchioness of Bath, Miss Talbot, Satisfaction, Mr. Thompson, Kate, and Magnum Bonum. Pansies, 24 blooms, 1st, Messrs. Downie & Laird, for Cyrus, J. B. Gough, Royal Standard, Flower of the Day, Miss Talbot, Sir J. Cathcart, Miss Walker, Duchess of Wellington, Jeanne, Jubilee, Alice, Indian Chief, Royal Albert, Sovereign, Miriam, Lady Emily, Nonpareil, Admiral Dundas, Satisfaction, Royal White, Una, Beauty, Lord John Russell, and Princess; 2nd, Mr. James, for Duke of Perth, Pandora, Earl Mansfield, Duke of Newcastle, Royal Visit, Father Gavazzi, Mrs. Campbell, Marie, Emperor, Miss Talbot, Goldfinch, Marion, Argo, Sir J. Cathcart, Flower of the Day, Jubilee, C. Cowan, Sultan, Isabella, Topaz, Beauty, Great Western, and Mary Taylor; 3rd, Mr. Bragg, for Black Prince, Marchioness of Bath. Lord John Russell, Telegraph, Blanche, Grace Darling, Harlequin, Miss Talbot, Dr. Phillips, Omniflora, Emperor, Pandora, Royal Standard, Lord Cardigan, Mr. Bragg, Evangelina, Glory, Magnum Bonum, Sir C. Napier, Sir E. Lyons, Mr. Thompson, Mrs. Marriott, Yellow Model, and Seedling. The Pansies from Messrs. Downie & Laird, of Edinburgh, were very fine. The seedling Pelargoniums were also very fine. Altogether it was a very interesting meeting.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

THE anniversary dinner of this excellent charity took place at the London Tavern, on Wednesday, the 11th of June, and was well attended; Sir Joseph Paxton, M.P., in the chair, supported by Sir Charles Fox, Frank Crossley, Esq, M.P., J. J. Mechi, Esq., and several gentlemen, nurserymen, and many of the leading gardeners. The interests of the institution were ably advocated by Sir Joseph Paxton, and donations to the amount of 270*l.* were announced during the evening. A liberal supply of fruit was contributed by several friends of the charity, and a bank of Geraniums and other plants behind the chair added very much to the decorations of the room. These were gratuitously contributed by Mr. Charles Turner, Messrs. Henderson and Son, and other nurserymen.

On the 9th inst. an election of two pensioners on the funds of the charity will take place, and subscribers of one guinea per annum are entitled to two votes. We cannot too earnestly recommend the institution to the notice of our readers, to many of whom the amount of the subscription is but a trifle, whilst to the charity it is a gain. There are sixteen candidates at the next election, their ages ranging from 54 to 83 years of age, and the greater the funds at the disposal of the committee the more they will be able to increase the number of pensioners.

THE AMERICAN EXHIBITION IN THE REGENT'S PARK.

ON the occasion of the Royal Botanic Society's June show, these plants were in perfection, and it is scarcely possible to see a grander display of flowers at one time. The immense undulated banks of Rhododendrons were a complete mass of flower, and away in the distance could be seen a magnificent tree—which seemed to look almost contemptuously on its smaller companions—of Lady Eleanor Cathcart, towering above the rest. There is this year an improvement in the arrangement of the ground, and the plants are exclusively Rhododendrons. We last year described many of the best varieties in the preceding exhibition, and on the present occasion we particularly noticed—

Mr. John Waterer, a very fine variety, deep scarlet with dark spots. This should be in every collection, as it is one of the finest, if not *the* finest of the scarlets, and is a free bloomer.

Mrs. John Waterer, pale rosy scarlet with spots, fine truss; a fitting companion for the other, and of a different shade of colour.

Lady Eleanor Catheart, soft salmon blush, with very dark spots, very free bloomer. This is a beautiful variety, of great merit.

Brayanum, soft rosy scarlet, fine form and truss. This is an exceedingly fine variety, worthy to be in every collection.

Concessum, delicate blush pink with warm pink margin, good form and truss. A very fine light variety, of great beauty, and a good bloomer.

Fleur de Marie, light rose with bright salmon rose margin, good form, but rather loose truss. A variety possessing beautiful colours and much to recommend it.

Maculatum grandiflorum, pale rosy purple with lighter centre, dark spots, large truss, and a very free bloomer. A very showy variety, contrasting well with its surrounding neighbours.

Everestianum, an excellent light coloured border variety, and a dense bloomer.

Gloriosum, partakes of the "catawbiense" habit, with immense trusses of pale silvery blush flowers.

Blandyanum, bright rosy scarlet, fine truss, and a free bloomer. A first class variety.

Blatteum, spotted like "Victoria," but not so dark in colour as that variety. Both are very free bloomers and good, but Victoria is the least showy.

Reedianum, one of the best and most useful in the whole collection, and should be in every garden where Rhododendrons are used. It is a variety of ponticum habit, partaking of the characteristics of that variety, evidently quite hardy and a late bloomer; bright rosy scarlet colour with spots. This variety will be valuable, as it is so bright and a later bloomer than many of the scarlet varieties.

Levefrianum, bright rose tinged with purple, and with very dark spots. A fine attractive variety.

Delicatum, pale blush tinged with deep blush, with green spots; good truss, a very showy free blooming variety.

Roseum elegans, soft pale rose and a dense bloomer; excellent for out-door decoration. A superb standard of this variety was planted near the fine specimen of Lady Eleanor Cathcart we have alluded to.

HORTICULTURAL SOCIETY.

THE adjourned special meeting of this Society took place in Regent-street on June 24, to receive the Report of the Council and decide on the future plans which the Report might recommend; Col. Challoner in the chair.

The Report informed the meeting that of the sum of 5000*l.* originally fixed on, as the amount to be subscribed to enable the Council to carry on the gardens at Chiswick, 3256*l.* 1*s.* had been promised in furtherance of that object; but as this sum was promised only on the conditions that the full amount should be subscribed, they could not avail themselves of any part of it; and it therefore remained for the Council to consider whether or not other plans might not be resorted to, to avoid if possible (which every Fellow of the Society must regret), giving up the lease of the Chiswick garden, and thereby abandoning the most important part of the Society's operations. With these views the Council asked for the meeting to confirm the powers already granted them by the bye-laws of the Society, so as to enable them to exercise their discretion as to what part of the Society's property should be first disposed of. The Report stated that could the Council obtain sufficient room for the purpose of the London exhibitions, &c., either in Burlington House or some other Government building, they would consider whether it might not be advisable to dispose of their present office in Regent-street, the value of which was estimated at nearly 5000*l.*; this would materially relieve their fixed debt. (We understood an applica-

tion to Government was about to be made, for the purpose of ascertaining how far Government would agree to afford them the necessary room.) In the next place they will take into consideration whether or not a uniform rate of two guineas, as the annual subscription of Fellows, should not be substituted for four guineas, the amount at present paid. But the privileges of existing Fellows to be by no means curtailed. Although the Council do not, and in fact could not, pledge themselves as to whether they should keep on the gardens or not, the Report stated that every available means should be tried before an event so disastrous to Horticulture should be allowed to take place; and that nothing short of the determination of the Council not to *increase* their present liabilities on any account, would induce them to abandon them. They hoped, by widening the basis of the subscription, and by good management, to be able to retain the gardens; and with the expression of their desire to effect this, hoped the meeting would strengthen their hands by affirming the Report.

It was moved by J. J. Blandy, Esq., and seconded by Mr. Spencer, "That the Report be received." Considerable discussion followed, several Fellows asking for information on various parts of it. The general tone of the discussion was entirely in favour of the Report, and a resolution embodying the principles of it was then put from the chair and carried unanimously.

We can only say, that we consider the Report was the only one which, under the peculiar circumstances under which the Council are placed, could be presented. Should the Council succeed in obtaining apartments from Government or elsewhere, the sum which the house in Regent-street would bring would go a long way towards liquidating the more pressing claims against the Society; and when once the Council can see their way clear to retain the gardens, and this fact becomes known to the public, we have no doubt that many of the subscribers to the garden fund will allow their subscriptions to remain, as adverted to in the Report; and should this be the case, a large portion of the Society's debt will be provided for, many gentlemen in the room having promised to double their subscription when they knew for a certainty that the gardens would be retained.

WEIGELA AMABILIS.

In your number for May, page 139, is a notice of this plant, comparing it with rosea, which, as an early forcing pot shrub, it far surpasses, and only requires to be more known to become a general favourite, and admired as much, I have no doubt, as it has been here for the last two seasons. It blossoms freely in a 48 sized pot; its light graceful branches, when covered with pinky blooms, make it a fit companion for the pretty Deutzia gracilis, which it much resembles in the treatment it requires. When done blooming I cut the plants down like the latter, inducing them to make as many young shoots as possible for the next season's display. By a succession it can be had in bloom from February up to the present month. J. F.

WARDIAN CASE AND AQUARIUM COMBINED.

[The following is extracted, by permission, from the *Gardeners' Chronicle*. The second illustration is our own.]

Not being aware that a fresh-water aquarium has before been connected with a Wardian case, I beg to furnish you with sketches of a

contrivance combining the two, which I have had in operation for some time. The apparatus consists of four parts made of flint glass, with a little cobalt, to give it a tinge of blue. Contrivances of this kind are

made of various sizes. In the one from which the first sketch was taken, the tank which contains the water in which are the aquatic plants, fishes, mollusks, and insects is about twelve inches in diameter and about nine inches deep; near the top in the inside is a flange with a groove, into which runs the condensed water from the bell-glass, which forms the Wardian case for the Ferns, Lycopods, &c.; from the groove it descends to the tank below. Into the centre of this vessel I put the glass pedestal. I then cover the bottom with about 2½ inches of fresh,

but not very rich soil, in which I plant my aquatics: I use for this purpose Valisneria spiralis, Aponogeton distachyon, Nymphæa odorata minor, and N. macrantha. On the soil I put one inch of well washed flints, or sea gravel, which prevents the insects or mollusks from making the water foul. I then introduce the water through a fine rose to about four or five inches deep, into which I put gold fish (small) or sticklebacks, or any other small fish, mollusks, Succinea putris, Planorbis corneus, carinatus, and marginalis, Cyclas rivicola and cornea; insects —any species of Colymbetes, Hygrotus, Hadaticus, Gyrinus, and several other aquatic genera; care must be taken not to introduce any of the large carnivorous larvæ. I then prepare for introducing the

plants proper for a small Wardian case—I put the soil into a blue glass dish, with a rim at the bottom to keep it steady on the pedestal; this dish is 1½ inch deep by seven in diameter, the soil is raised in the centre about two inches; in this I plant the tallest Ferns or Lycopods, and the smaller round the edge of the dish. The Ferns I plant are Adiantum Capillus Veneris, Lastræa dilatata Schofieldi, a beautiful small Yorkshire variety; Asplenium viride and trichomanes; Asplenium fontanum, &c.; Lycopods Willdenovi, umbrosum, stoloniferum, mutabile, densum, and lepidophyllum. When planted I cover the soil in imitation of rockwork with agates and pebbles of any sort. I then give the whole a good watering before placing the dish on the pedestal; the whole is then covered with the bell-glass. One before me at the present time has been standing in a window eight months, the water has never been changed, or any addition made except a small quantity once given to the Ferns, &c., in the dish. Should the water become green in the summer a small piece of gutta-percha pipe, with a small rose at the end, will draw off the water, which may be replaced. The bell-glass may likewise be removed with benefit to the plants, and a sprinkling of water given them.

Museum, York. HENRY BAINES.

THE SCOTTISH PANSY SOCIETY.

THIS Society held its first meeting for the season at the Caledonian Society's Garden, Inverleith, Edinburgh, on the 5th ult. For some time previous, the weather had been unusually unfavourable, and much against the success of growers in exposed situations, many of whom were unable to make up their stands; consequently, the flowers produced were not as numerous as usual; those which were exhibited, however, were quite up to the usual average—indeed, some of the stands, especially in the Gardeners' and Amateurs' classes, were superior to those brought forward in 1855. The following is a list of the awards; to avoid useless repetition, the names only of the flowers in the winning stands are given.

Nurserymen, best 24:—1st, Messrs. Downie and Laird, Edinburgh, with Sir Colin Campbell (Pater & Small), Duchess of Wellington (Downie & Laird), Royal Standard (Dickson & Co.), Jubilee (D. & Co.), J. B. Gough (D. & L.), Father Gavazzi (Holland), Cyrus (D. & Co.), Flower of the Day (D. & L.), Lord Raglan (P. & S.), Princess (D. & Co.), Lady Emily (D. & L.), Lord J. Russell (Turner), Rev. H. Gosset (Turner), Beauty (D. & L.), Jeannie (D. & L.), Alice (D. & L.), St. Andrews (D. & L.), Miriam (D. & Co.), Gem (Syme & Middlemas), Earl of Cardigan (Holland), Sovereign (D. & Co.), Nonpareil (D. & Co.), Sir J. Cathcart (Turner), Indian Chief (D. & Co.); 2nd, Messrs. J. Dickson & Sons; 3rd, Mr. J. Black, Currie; 4th, Messrs. Robertson, Paul & Co., Paisley.

Gardeners and Amateurs, best 18:—1st, Mr. James Henderson, gardener to C. K. Sivewright, Esq., Cargilfield, with Flower of the Day

(D. & L.), Mrs. Dodwell (Fisher), Sir J. Cathcart (Turner), Royal Albert (Turner), Lord Raglan (P. & S.), Royal Standard (D. & Co.), Charles Cowan (M'Nab), Alice (D. & L.), Beauty (D. & L.), Emperor (Hale), Jeannie (D. & L.), Cyrus (D. & Co.), Sir R. Napier (—), Duke of Perth (Handasyde), Lord J. Russell (Turner), Minerva (D. & Co.), Monarch (Hale), Mesmerist (Veitch); 2nd, Mr. T. Reid, gardener, Broomfield, Blackhall; 3rd, Mr. Alexander Shearer, gardener to Marquis of Tweeddale, Yester; 4th, Mr. W. Campbell, gardener, Pollock, Glasgow.

Gardeners and Amateurs, best 12:—1st, Mr. Shearer, gardener, Yester, with Fanny Kemble (—), Lady Emily (D. & L.), Miriam (D. & Co.), Alice (D. & L.), British Queen (D. & Co.), Sovereign (D. & Co.), Earl of Mansfield (D. & Co.), Cyrus (D. & Co.), Juventa (Hooper); Uncle Tom's Cabin (M'Nab), Monarch (Hale), St. Andrew (D. & L.); 2nd, Mr. W. Campbell, Pollock; 3rd, Mr. M'Intosh, gardener, Inglis Green; 4th, Mr. Hampton, Dundee.

Gardeners and Amateurs, best 6:—1st, Mr. M'Intosh, with Duke of Sutherland (Tinley), Alice (D. & L.), Flower of the Day (D. & L.), Father Gavazzi (Holland), Alpheus (D. & Co.), J. B. Gough (D. & L.); 2nd, Mr. J. Cunningham, Cowglen Cottage, Glasgow; 3rd, Mr. Henderson.

Classes open to all, best 12—4 yellow, 4 light grounds, and 4 selfs:—1st, Mr. J. Cunningham, with Father Gavazzi (Holland), Alice (D. & L.), Lord J. Russell (Turner), Cyrus (D. & Co.), Charles Cowan (M'Nab), Sir C. Campbell (P. & S.), Royal Standard (D. & Co.), Princess (D. & Co.), Wonderful (Hooper), Jeannie (D. & L.), Royal White (Thompson), St. Andrews (D. & L.); 2nd, Mr. James Gibson, Glasgow; 3rd, Mr. Henderson.

Amateurs exclusively, who cultivate their own plants, best 6:—1st, Mr. J. Cunningham, with Cyrus (D. & Co.), Sir C. Campbell (P. & S.), Jeannie (D. & L.), Alice (D. & L.), Mrs. Dodwell (Fisher), Miss Talbot, (D. & Co.); 2nd, Mr. Alexander W. Lamond, Arbroath; 3rd, Dr. Stuart, Chirnside.

Sweepstakes:—Mr. Wm. Campbell, Pollock, with Yellow Climax (P. & S.). Sir C. Campbell, (P. & S.), Lord John Russell (Turner), Duke of Sutherland (Tinley), Princess (D. & Co.), Father Gavazzi (Holland), Sir C. Napier (P. & S.), Royal Standard (D. & Co.), Sir J. Cathcart (Turner), Satisfaction (Turner), St. Andrews (D. & L.), Royal White (Thompson).

Best Self in the Room:—Mr. J. Cunningham, with Jeannie (D. & L.).

Best Yellow ground:—Messrs. Downie and Laird, with Cyrus (D. & Co.).

Best Light ground:—Mr. James Henderson, with Royal Standard, (D. & Co.).

Best Pansy in the Room:—Mr. J. Cunningham's bloom of Jeannie.

Best Dark Self in Amateurs' class:—Mr. J. Cunningham with Jeannie.

Best Yellow ditto:—Dr. Stuart, Chirnside, with Sovereign (D. & Co.).

Best Yellow ground:—Mr. J. Cunningham, with Cyrus (D. & Co.).

Best Light ditto:—Mr. J. Cunningham, with Sir C. Campbell (P. & S.).

Cyrus, which won the prize for the best yellow ground in 1855, was, it will be seen, again successful this season; the same also was the case with Royal Standard among the light grounds; establishing these two at the head of their respective classes. With respect to the above there seemed to be no doubt as to which was the best variety in its class; the only difficulty was which bloom to select of each. The bloom of Jeannie which won the prize for the best self, and also that for the best flower in the room, was an exceedingly fine one, far superior to any other of the same variety which was exhibited on the occasion, most of which were deficient in smoothness.

Many seedlings were sent in competition for the prizes offered. No award, however, was made, as none of them came up to the requirement "that they must be superior to varieties already known in their class."

The Scottish Pansy Society has now been in operation for twelve years, during which period it has effected much improvement in the flower which it so liberally encourages—many are the sterling good varieties which it has been the means of calling into existence. The interest shown in the Society seems to be on the increase; for at the general meeting held after the exhibition, the contributions towards the prize fund for 1857 were considerably larger than has been the case on any previous occasion.

GRASS? OR MOSS? ON LAWNS.

FOND as I am of every part of my garden, and of every one of its inmates, I think its lawn ranks highest with me; perhaps because its velvet surface is the best platform from whence to see the serpentine belt of minature fruit trees and flowers, and flowering shrubs, by which it is engirdled; perhaps because it has cost me some time, trouble, and expence to bring it to its present smoothness. But, that human pleasure in things mundane may not be unalloyed, I was troubled last year, as the whale is said to be, by a peculiar insect, from which it cannot shake itself free, by a fear that the moss which I saw in patches over the whole of it, might in time supersede the grass and leave my beautiful carpet threadbare and unsightly. After the first mowing this spring I carefully examined it, and discovered, or thought I discovered, to my horror that the enemy was gaining upon me. Just at this time the *Gardeners' Chronicle* came to my rescue, and in an answer to some correspondent who was suffering from the same disease, said, "Water your lawn with gas-water. The moss will die and the grass flourish." With a proud consciousness of certain victory I went immediately to the gas-works, hired a water-cart and two men, and in spite of the exclamations of my family, who all declared they should be poisoned (in fact there *was* some danger of the younger children being stifled by the fumes of highly creosoted ammonia and hydrosulphuric acid) in the course of the day 150 gallons of gas-water, diluted with 300 gallons from the pond, were distributed over the lawn, with effects that are worth recording.

In the first place the children did not die, though the moss did. The gases are all very volatile, and the water-pots had hardly ceased their work when the horrible stench had dissipated itself. But, under the influence of the stimulant, the grass, each part as it was watered, assumed the delicate green of fresh growth, all the more striking from the general stagnation around, owing to the long drought and the cold north-east winds. But, by the next day, this had changed to a suspicious apple green; by the day after to a decided yellow, which finally turned to the brown of death; in which state it continued a full fortnight. Oh, that fortnight! The titterings of the family might be silenced by the voice of authority; but it required the self-command of a courtier to answer, with an unruffled mind, the condolence of one friend at the extent to which my beautiful lawn had suffered by the trying spring; the enquiries of another, who called on purpose to know whether I had been using arsenic to poison the worms; and the impertinence of a third who thought I had done it to have it all gravel. I almost myself believed at last that the grass was injured. *That*, however, was not to be added to the list of my annoyances. The *Gardeners' Chronicle* was right. The moss has slowly perished, and the grass has still more slowly shown an intention of supplying its place, though it seems more rank than it was and less velvety. But the unkindest cut of all was still to come; and that was a question put to me by a knowing one, "But why did you wish to get rid of it? Beaton considers *moss good for a lawn*, as he stated not long ago in the *Cottage Gardener*, in reply to some one who asked how to destroy it?" Really the question never occurred to me before. Will you kindly answer it for me, and tell me whether I *ought* to have wished to destroy it; for certainly the moss is both the softest and the driest part to walk upon. It is gone now, every shred of it, and for twenty-four hours after every mowing the places look patchy, where it once did its best to please me. And is it absolutely true that I have spent fifteen shillings, incurred much of domestic reproach, and trial of the serenity of my temper, and encouraged sympathizing or facetious remarks from neighbours, all to get rid of my best friend? In other words—is moss bad for a lawn?

IOTA.

[On lawns which have been mown for a number of years, Moss is frequently met with, particularly when the soil is dry and sandy. We do not consider it objectionable, as it assumes its greatest luxuriance in the autumn and winter months, when the natural Grasses go into a state of rest; and as the Grasses grow in the spring, the Mosses mostly die away, and are soon hidden. Unless, therefore, its growth preponderated greatly, and was destroying the Grass, we do not recommend it to be eradicated; and not then by such a dangerous remedy as gas water, whose effects are worse a hundred times than the disease. Where the Grass on lawns gets thin, sow among it in April or August a mixture of Crested Dog's-tail, Sheep's Fescue, and Wood Meadow Grass, with a little Trifolium minus—these will spring up and thicken the bottom; or dress your lawns over in April with a mixture of guano, superphosphate of lime, and nitrate of soda. Any respectable

dealer in artificial manures will make you up a mixture of the above of the proper proportion for the extent of lawn; this will greatly improve the appearance of your lawn, by promoting a close thick growth, without driving the Grasses too much; and we strongly recommend you to try this, if your Moss again gains on you.—ED.]

CRYSTAL PALACE EXHIBITION.

THE Company was favoured with fine weather for their second show this season, which took place on Wednesday and Thursday, the 25th and 26th ult. The arrangement of the plants this time was somewhat different from that in May, and was, perhaps, the best that could have been adopted under the circumstances; still, however, we feel compelled to adhere to our opinion that nothing beats the open lawn and canvas tents for rendering a flower-show effective and pleasing. As it was, however, the alteration was an improvement, and on the first day upwards of 14,000 people visited the building. The display was chiefly confined to the principal transept, along the sides and middle of which the plants were tastefully arranged, and in the centre, so as to form an object at once grand and striking, was a raised circular dais or clump quite 30 feet in diameter, surmounted by an Araucaria, and surrounded with stove and greenhouse plants. Here Mr. Collyer's noble specimens were exhibited to much advantage, as well as those from other growers. On the two stages in the middle were Orchids, Ferns, and Pitcher Plants, all of which, we need not say, associate well together, and round the sides were variegated plants, of which there were several charming collections; Azaleas, Pelargoniums, Roses, and Heaths.

The ends of the stages, at the four corners where the nave crosses the transept, were rounded off in an architectural and tasteful manner, by means of circular stagefuls of plants crowned with different kinds of figures in statuary, which overtopping and looking down, as it were, upon the plants, served to furnish variety, and set the latter off to good advantage. The magnificent Orange trees, too, with their lively green foliage, rearing their heads above the stages in front of them, served to fill up the spaces between the top of the plants and the lower gallery; while above these, again, the gaiety was maintained by the hanging baskets, about which there was a wild beauty and luxuriance which was quite delightful.

With respect to the exhibition, the names of the different plants composing the great classes of which it was chiefly made up, having been fully given in our report of the Royal Botanic show, which will be found in another page, little more now remains for us to do than to refer to the new things which were produced on this occasion.

Though not in flower, Mr. Glendinning, of Chiswick, furnished some interesting plants, among which were the new Larch called Abies Kæmpferi, to which we hope to allude more particularly by-and-by; a species of Rhamnus, from which the green dye of China was said to be obtained; and an Orange from the North of China, which was stated

to be hardy; it is furnished with sharp spines and small cut leaves. The same exhibitor likewise showed Erica Spenceriana, of which we hope soon to give a coloured representation. Messrs. Veitch sent Philesia buxifolia, flowering freely in a small state; Sonerila, Leptodactylon, two Nidularias, a species of Capsicum with yellow fruit; Ixora floribunda and Lobbi; Gesnera Doncklaari, of which we some time ago gave a coloured plate, and beautiful plants of Wellingtonia. The same firm also showed Rhopala Jonghi, Myrtus microphylla, Ouvirandra fenestralis, or Water Yam, of which we lately gave a drawing of a leaf; Aralia japonica, and Theophrasta imperialis; the last has leaves of great size. Of flowering plants, though not all quite new, Messrs. Veitch had a fine variety of broad-leaved Kalmia called picta, two Hoyas, an Aerides, the beautiful pink-flowered Rhododendron called Princess Royal, a parasol-shaped plant of Lapageria rosea, beautifully flowered, a yellow annual called Wartzia aurea, and a Thibaudia. Messrs. Jackson, of Kingston, sent the white variety of Agapanthus umbellatus, which is rather a pretty plant. From the above, some idea may possibly be gathered of what kind of rarities this exhibition was possessed; and as our space is but limited, let us now pass on to the florist flowers.

For collections of twelve Pelargoniums, Mr. Turner was a long distance before the other competitors. The only variety shown that we have not before seen this season was a fine plant of Portia. Messrs. Dobson, Messrs. Fraser, and Mr. Gaines came next, and an extra prize to Mr. Cutbush. Private growers for six plants, Mr. Holder, gardener to the Rev. E. Coleridge, Eton College, was first; second prize, Mr. Windsor. Mr. C. Turner sent twelve plants of twelve fancy kinds: these were beautifully flowered, and were deservedly first. Lady of the Lake, Queen of Roses, Cloth of Silver, and Evening Star, were very good in modern varieties, Celestial, Cassandra, Magnum Bonum, Perfection, and Erubescens were fine. Messrs. Frasers were 2nd, with old kinds, with the exception of Evening Star; 3rd, Mr. Gaines; 4th, Mr. Cutbush. In the class of six plants for private growers, Mr. Windsor was 1st, with nice fresh plants. The same seedling Pelargoniums have been so frequently shown that we shall not now describe them; we give the awards on this occasion, however, to show what varieties remain good to a late period, as prizes were liberally offered on this occasion for flowers raised in 1855-1856. First prizes were given to Spotted Gem (Turner), Prince of Prussia (Turner); 2nd prizes to Viola (Hoyle), Matilda (Hoyle), Conspicuum (Turner), and 3rd prize to Miss Foster (Turner). King of Scarlets (Turner), Agnes (Hoyle), Standard (Hoyle) were also shown good. Ardens (Beck) is a nice bright scarlet crimson, and Amethyst, a pretty purple, by the same raiser, were promising flowers. Clarissa (Topping), a Virgin Queen style of flower, was exhibited by Messrs. Veitch. It is a free-flowering, good-shaped kind, but shown in bad condition.

Cut Flowers were short, Roses not yet being in good bloom. Messrs. Paul, of Cheshunt, were first, the same award to Mr. Francis, Hertford. Mr. Wilkinson, of Ealing, also exhibited a collection in this

class of fifty varieties. Mr. Francis was first for twenty-four varieties. In private growers, 1st prize, A. Rowland, Esq., Lewisham; 2nd, Mr. G. J. Brush, Gardener to J. Tretton, Esq., Norwood; 3rd, Mr. G. Bradstock, Gardener to T. Anderson, Esq., Carshalton.

In the Miscellaneous Class Messrs. Lane sent a collection of cut Rhododendrons in good variety, Mr. Tyso, of Wallingford, a large and well-bloomed collection of Ranunculuses, a smaller collection also from Mr. Mitchell, of Brighton. Mr. Salter, of Hammersmith, sent Herbaceous Pæonies. Some Verbenas came from Mr. Shrimpton, of Putney Heath, in single trusses.

Mr. C. Turner exhibited 24 varieties of finely-grown and well-laced Pinks, the best of which were, Adonis, Mr. Stevens, Mrs. Stevens, New Criterion, Purity, James Hogg, Sarah, Cardinal, Purple Perfection, Rival, Mr. Hobbs, Sovereign, and Optima. Prizes were awarded to Mr. Turner for the Pinks, and to Mr. Tyso for Ranunculuses. Also to Mr. Salter for his Pæonies. Pansies were not good, but three prizes were awarded.

There were fine collections of Calceolarias. Mr. James, of Isleworth, was first, with good plants of Purity, Marie, Duchess of Northumberland, Virago, Commander in Chief, and Golden Fleece; 2nd prize, Mr. C. Turner, with Orange Perfection, Tamberlik, Lady Grenville, Eclipse, Albira, and David Copperfield. These were all shrubby varieties of excellent habit. Messrs. Dobson and Son had a 3rd prize, and extra prizes were awarded to Mr. Gaines, and Mr. Bates, of Oxford.

Fuchsias were but poor. 1st, Messrs. Dobson; 2nd, Mr. Blundell, Gardener to W. D. Rowland, Esq. The best kinds were Queen of Hanover, Omega, and Glory.

In Bedding Plants Mr. Kinghorn, of Isleworth, sent well-bloomed specimens of General Pelissier, Annie, and Countess of Warwick. These are excellent free flowering Pelargoniums; the two latter have variegated foliage, and have maintained the high character we gave them in our reports last season. Mr. Kinghorn exhibited some new kinds, Richmond Gem was very fine, being very bright with a very large truss. It has white footstalks, in this respect resembling Pelissier. Captivation and Prim are two good scarlet kinds, the latter has very long footstalks. These were also exhibited by Mr. Kinghorn.

Messrs. Lee, of Hammersmith, sent nine plants of a Scarlet Geranium, named Stunner, of a deep rich scarlet colour; but has not much to recommend it. A Bedding Geranium, exhibited by Messrs. Veitch, of Exotic Nursery, King's Road, Chelsea, is an excellent free flowering variety, named Quercifolium floribundum; colour rosy pink, with spot on the top petals. The same firm exhibited Belvidere (Topping) rich lake, with dense spot on each petal.

The show of Fruit was tolerably extensive, and included many excellent productions. The Pines exhibited by Messrs. Fleming, Burn, Jones, Povey, and Barron, were good specimens of culture. There were some fine dishes of Hamburgh Grapes exhibited, in addition to those which obtained prizes; amongst which we noticed some Hamburghs

from Mr. Frost remarkable for their size, but had been spoiled in travelling, and a dish of finely coloured Hamburghs from Mr. Manby. A seedling white Grape was exhibited by Mr. Carpenter, called Perry Bar Hamburgh. This Grape has round berries, larger than the Duch Sweetwater, it has a full vinous flavour, but rather a thick skin; we understood it to be a cross between the Black Hamburgh and Sweetwater, and it appears to partake of the habit of both parents. Some very capital Muscat Grapes were shown by Messrs. Clark and Turnbull, very fine Peaches by Mr. Snow, and good Nectarines by Mr. Davis. There was a scant supply of out-door Strawberries, and some well managed Vines in pots.

Collections of Fruit, eight dishes: 1st, Mr. Fleming, Trentham; 2nd, Mr. Nichol, Oxton House, Devon; 3rd, Mr. Monro, Colney House.

Pines, collections of three: 1st, Mr. Fleming; 2nd, Mr. Jones, Dowlais; 3rd, Mr. Beale.

Pines—Providence: Mr. Povey and Mr. Fleming, equal 1st; 2nd, Mr. Gilham. Queens: Equal 1st, Mr. Burn, gardener to Colonel Pennant, and Mr. Barron, Singleton; 2nd, Mr. Jones, Dowlais; 3rd, Mr. Davis, Cardiff; extras to Mr. Burn and Mr. Dalrymple. Jamaicas, &c.: 1st, Mr. Davis.

Grapes, three varieties: 1st, Mr. Turnbull, Blenheim; 2nd, Mr. Young, Dulwich. Single dishes, Hamburgh: Equal 1st, Mr. Fleming, and Mr. Smith, Norwood; equal 2nd, Mr. Hudson, Wandsworth, and Mr. Hill; extra, Mr. Davis. Single dishes, Muscats: 1st, Mr. Clark, Hoddesden; 2nd, Mr. Turnbull; 3rd, Mr. Davis; extra, Mr. Taylor. Single dishes, Sweetwaters, &c.: 1st, Mr. Forsyth, Gunnersbury; 2nd, Mr. Blake. Baskets of 12 lbs.—Market Gardeners: 1st, Mr. Hill, gardener to — Sneyde, Esq.; 2nd, Mr. Davis; 3rd, Mr. Spary and Mr. Hindle; extras, Mr. Mitchell and Mr. Kay.

Peaches, single dishes: 1st, Mr. Snow; 2nd, Mr. Turnbull; 3rd, Mr. Frost, Preston, and Mr. Mitchell; extra, Mr. Monro.

Nectarines: 1st, Mr. Davis; 2nd, Mr. Ayres, Whittlebury; 3rd, Mr. Hill.

Melons, green-fleshed: 1st, Mr. Dalrymple, Pontypool; 2nd, Mr. Teg; equal 3rd to Mr. Snow, Mr. Ewing, and Mr. Taylor. Scarlet-fleshed, Mr. Bailey, Shardeloes.

Figs: 1st, Mr. Snow; 2nd, Mr. Ewing.

Cherries, three dishes, distinct: Mr. Fleming. White, single dish: Mr. Fleming. Black, single dish: 1st, Mr. Ferguson, Stowe; 2nd, Mr. Fleming.

Plums: 1st, Mr. Fleming; 2nd, Mr. Monro.

Strawberries, three dishes: Mr. Turnbull. Single dishes: 1st, Mr. Wortley; 2nd, Mr. Cuthill.

Grapes in pots: 1st, Mr. Forsyth; 2nd, Mr. Page, Streatham.

Plums, Apricots, &c., in pots: Mr. Fleming.

Fruit of superior excellence: Extra prize to Mr. Carpenter for seedling Grapes noticed above; Mr. Turnbull, for seedling St. Peter Grape; Mr. Dalrymple for Strawberries; Mr. Clarke for Citrons; Mr. Hill for Black Prince Grapes; Mr. Monro for collection of Peaches.

THE BATH HANOVERIAN BAND COMMITTEE held their first Horticultural Féte for the present season on the 28th of May, in Sydney Gardens. Last year we announced in our pages that horticultural exhibitions were about being established in Bath, under the management of the principal tradesmen of the town, who, determined to have some rational enjoyment for themselves and families, had formed a committee, and had engaged the services of the Hanoverian Band for the purpose of performing daily in the park and other public places. This display of public spirit was properly appreciated by their fellow-townsmen, and it was last year suggested that a horticultural féte would be an additional source of gratification to the members and the public generally. Notwithstanding the complete failure of the old horticultural society in Bath, the suggestion was entertained by the committee, and warmly taken up by the body of exhibitors, who offered to exhibit their productions for nothing, should the féte prove a failure. So far from this being the case, however, the public spirit of the committee was responded to by the whole neighbourhood, as well as by the inhabitants of Bath. They realised a large sum by the féte, gave the exhibitors liberal prizes, and had something left in hand. Emboldened by the good feeling which had become established between themselves and the exhibitors, they issued this season a programme for three shows, the first of which took place as above noticed, and we have the greatest pleasure in asserting that it was by far the best exhibition ever seen in Bath. We can only find space to notice a few of the articles shown; pre-eminent among which were the Chinese Azaleas of — Lawrence, Esq., which were not surpassed by any we have seen at the metropolitan shows; those exhibited by the Rev. — Rhodes were nearly equal, some of them quite so. In the next class of sixes, E. Barton, Esq., of Laycock, exhibited six plants not quite so large, but in splendid condition; in fact, we never saw better grown plants. Stove and greenhouse plants and Heaths, contributed by Messrs. Lawrence and Tugwell, contained fine specimens of good culture. Mr. Bassett, of Weston Birt, had a fine collection of ornamental-leaved plants, including many rare things. This gentleman had also a group of Ferns and Lycopods, of which interesting family half a tent was exhibited. Orchids and cut flowers and fruit were all equally meritorious, and prove how greatly the cultivation of plants is increasing.

CALENDAR OF OPERATIONS FOR JULY.

Carnations and Picotees.—There has been too much rain for these plants, but the grower for exhibition will not be so likely to be teased with thrip as a hot dry season produces. Keep the plants neatly and well tied up. Those that require large blooms must now attend to disbudding, leaving one, two, or three, according to the strength of the plant and the known character of the flower, some varieties being much larger and more full of petals than others.

Conservatory and Show-house.—Here little need be added to the directions in previous calendars. Keep a sharp look-out for insects. Syringe freely all plants not in flower.

Dahlias.—These must be coaxed to grow as fast as possible, to be in time for the early exhibitions of this flower. If dry weather, watering overhead early in the evening, stirring the soil about the plants, keeping down insects, and securely tying the plants, are the ordinary methods adopted to secure this end. If slugs are troublesome, fresh lime strewed about the soil as well as over the plants, when they are out, either late in the evening or early in the morning, will be effectual, if followed up for a short time. If earwigs destroy the points of the plants, we have a remedy in Edwards's trap. A little short manure spread round the plant as mulching is very beneficial. This should be done about the middle of the month, as it can be done more easily before the side stakes have been used to tie the plants to.

Flower Garden.—The frequent showers of rain we have lately had will have obviated the necessity of much watering; this will have saved much labour, which ought to be usefully and profitably employed otherwise. Pegging down and tying up will demand considerable attention. Keep everything as neat and trim as possible.

Greenhouse (hard-wooded).—Attend to the young stock in pits and frames; there will be every now and then some plants that will require shifting into larger pots; turn them round occasionally, and stop and train the young shoots. Towards the end of the month, if the weather be fine, the lights may be left off during the night. Attend to large specimens out of doors; see they do not suffer for want of water in dry weather, nor from excess of water in wet weather. *Soft-wooded Plants.*—See directions in previous calendars.

Hollyhocks.—Side shoots should be taken off. This answers two purposes: they make cuttings which produce early plants for next season, and it strengthens the main shoot, thereby producing larger blossoms. The Hollyhock, like the Dahlia, will be strengthened by mulching.

Kitchen Garden.—The sowings of the chief crops of the various kinds of vegetables being now over, the principal work will be to attend to thinning in proper time, to make good all vacancies, to guard against their suffering either from insects or drought, and to keep constantly hoeing among them, in order to promote a healthy and luxuriant growth. Plant out immediately the principal breadth of Celery in well manured trenches; also Leeks. Plant every vacant space with Broccolis of sorts, Brussels Sprouts, Borecole, Savoys, &c. Plant Lettuces and Endive. Sow a good breadth of Turnips; sow Endive, Lettuces, and Radishes; sow Cabbages. Plant a good breadth of Cauliflower now—they will come during the autumn.

Melons.—Give abundance of air when the fruit are approaching maturity; keep the atmosphere dry; attend to late crops; thin shoots, water, &c.; still keep up a regular bottom heat.

Orchard House.—Attend carefully to watering. Syringe freely, and give abundance of air. Stop and thin shoots, and do not retain one more than is necessary.

Pansies.—Seed should be gathered for a short time longer, but not from flowers that have become small and out of colour from the plant having become exhausted. Continue to propagate by putting in cut-

tings that are young and healthy. Plant out in sandy soil the young stock, as soon as rooted.

Peach-forcing.—When the fruit is all gathered in the early house, give the trees a few good heavy syringings to clear them of red spider, &c.; keep the foliage in a good healthy state as long as possible; by this means the wood will be properly ripened, and this is a point of the utmost importance, as on it depends in a great measure the success or failure of next season's crop. When late crops of fruit are swelling, water must be supplied liberally, and where it is ripening it should be withheld.

Pelargoniums.—We are fast approaching the general cutting down. Before doing this the plants should be gradually dried off. It is better, both for the young wood intended for cuttings, as well as for the old stool. Seed should be sown as soon as ripe enough. There have been some fine new things shown this season by the principal raisers. Foster, Hoyle, Beck, and Turner have each exhibited some very promising seedlings. There appears to be a never-dying interest in this most showy and most interesting greenhouse plant. Nothing, certainly, can exceed the beauty of a well-grown house of Pelargoniums. Fancy varieties may be cut down also, and used generally pretty much like the large-flowered kinds. The cuttings, when put in, should be longer, or they are liable to dry up. They will break up at the bottom —the plants will not be long.

Pinks.—The bloom in the south will be drawing to a close; the late varieties are, however, good yet, as well as in colder districts. The bloom has been very fine. The showers experienced during May and the early part of June have caused them to lace beautifully. Cardinal, New Criterion, Sovereign, Purity, Mrs. Norman, Adonis, Mrs. Stevens, Mr. Stubbs, Koh-i-noor, Criterion, Brunette, James Hogg, have been very finely exhibited. Finish putting in cuttings with all dispatch, in the ordinary manner, under small glasses with a little bottom heat.

Pleasure Ground.—Rolling, mowing, and sweeping are, at this season, the principal matters to be attended to; and, if the weather be showery, they will often require doing, to keep up anything like an appearance of order and neatness.

Roses.—Where our previous directions respecting searching for maggots and destroying them have been neglected, the large number of the earliest flowers rendered imperfect is now apparent, and will, we trust, be a lesson for the future. We never remember, either, so much destruction being committed by the maggot, which bores the young shoots. Where the ends of them are seen to flag, let them be cut off below the perforated part and trodden under foot. If fine blooms are required, the buds must be thinned and copious doses of liquid manure freely administered. When the sun is powerful, shading will be requisite. This may be easily done by means of hoops of split hazel or willow, with cross pieces to form a dome, being covered with thin calico or paper, and fixed in a couple of cleft sticks, the flowers being tied so as to prevent rubbing. In pots, where flowers are over, they should be cut back, plunged in ashes, liberally top-dressed with decayed manure, and watered as frequently as dry weather may render necessary.

Correa Cardinalis.

Plate 116.

Jas Andrews del.t & Lithco

Printed by C Chabot

CORRE

Among the new plants
the Crystal Palace in
number was one of the
raised by Messrs. Veitch a
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to 6 feet. One
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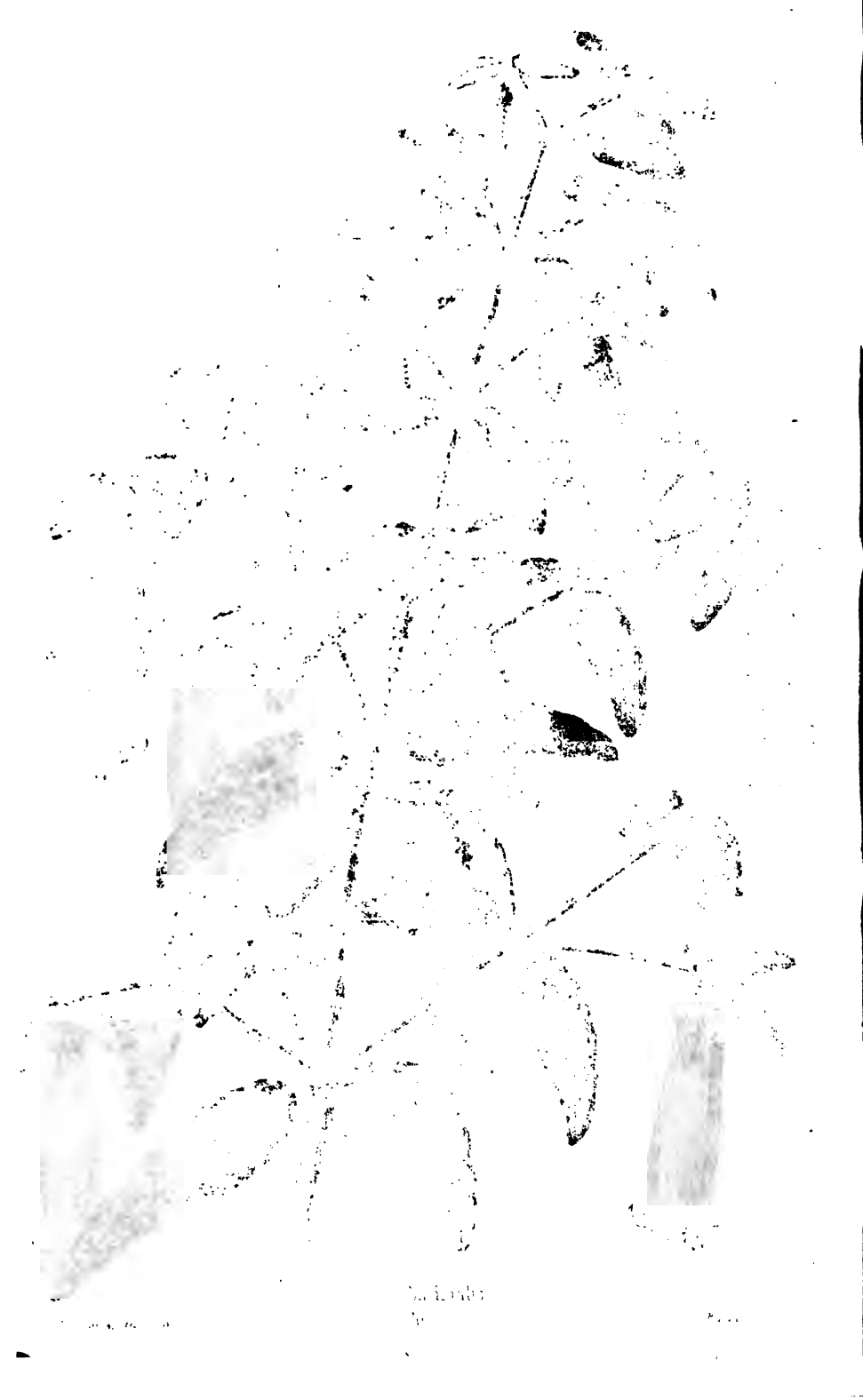
Peas' Marrowfats. This variety should not be sown
good sort, as it is a robust grower and a good cropper.



CORREA CARDINALIS.

(PLATE 116.)

AMONG the new plants exhibited by Messrs. Veitch and Son at the Crystal Palace in May last, that figured in our present number was one of the handsomest and most interesting. It was raised by Messrs. Veitch and Son from Australian seeds found in the vicinity of the Latrobe River, where plants were discovered in sandy places, on the plain of Port Albert, Gipps Land, Colony of Victoria, South Australia. In habit it resembles Correa ventricosa, but it is far superior to that kind in colour and attractiveness, producing rich scarlet flowers an inch to an inch and a half in length. It is an abundant bloomer and of compact habit, and continues blooming longer than any other variety. As Correas are so easily cultivated, we hope to find this valuable greenhouse plant more generally grown.

NEW PEAS, &c.

THREE new Peas were ushered into notice this spring with very high recommendations. One of them, Dillestone's Early Prolific, was to be *the earliest*, and Harrison's two new varieties, were to be as early as the Early Frame, with Knight's Marrow flavour. These, with several other varieties, have been proved by an eminent gardener in our immediate neighbourhood, and with the following results:

Dillestone's Early Prolific, sent out as a fortnight earlier than Daniel O'Rourke. In this instance we could see little or no difference as to earliness. It may be a day or two earlier, but we could not detect it. A friend in Yorkshire says that he sowed this and Daniel O'Rourke on the same day, and that it was about a week earlier. It is a free bearing variety, from three to four feet high, with a short well-filled pod, and in this respect we think Daniel O'Rourke the best podder, if not the best Pea.

Harrison's Perfection, white Marrow } 3 to 4 feet.
Harrison's Glory, blue Marrow . . }

In these two varieties no perceptible difference can be seen when growing; either or both may be regarded as most desirable, because so early as the Early Frame, with the productiveness and flavour of Knight's Marrow. The pods are produced in pairs, as in Hairs' Mammoth, from which they seem to be seedlings. They are both very heavy croppers, and come in immediately after Daniel O'Rourke.

Dickson's Favourite, 5 to 6 feet. One of the very best second early Peas, producing an abundant crop of handsome well-filled pods, from eight to ten peas in a pod.

Lord Raglan (Epps), 3 feet. An excellent late Marrow Pea, bearing a close resemblance to Hairs' Mammoth. This variety should not be sown thickly in good soil, as it is a robust grower and a good cropper.

Monarch (Epps.) A very tall-growing kind, and the pods fill rather better than British Queen, which it resembles, but is not preferable to it.
Danecroft Prolific, 3 to 4 feet. A capital late Pea and a good cropper.
British Queen. The best of all the tall late Marrows.
Ne Plus Ultra. Closely resembling British Queen.
Thurston's Reliance, 6 to 7 feet. A late Marrow Pea of very good quality, resembling Ne Plus Ultra and others in growth.
Champion of England, 5 to 6 feet. A good second crop Pea, and a good cropper.
Fairbeard's Surprise, 5 feet. A good second crop Pea, and a good cropper.

All the above varieties were sown on the 23rd of April, in *good, well-trenched soil,* indispensable requisites to the growth of good Peas. With regard to early Peas, we do not consider that an earlier than Daniel O'Rourke is requisite, unless a much hardier race can be procured to resist spring frosts; but it is essential that a Pea as *early as Daniel O'Rourke, with the flavour and productiveness of our best Marrowfats,* should be procured, and to the attainment of this object we direct the attention of hybridisers. For small, or even large gardens, we recommend the following sorts:—

First Early—Daniel O'Rourke (with a succession a fortnight after for large gardens).
Second Early—Harrison's Perfection or Glory, Dickson's Favourite.
Third Crop—Champion of England.
Fourth Crop—Lord Raglan, Hairs' Dwarf Mammoth, British Queen.

Near these Peas was a breadth of Cauliflowers, consisting of—

Early London—the earliest.
Walcheren and Waite's Alma—second early.
The Alma seems to be an improved Walcheren, is dwarf and compact in growth, with a close head, and may be regarded as an excellent variety.
Mitchell's Hardy. We cannot see that this is better than Waite's Alma, although rather later, with more pointed foliage and of a little dwarfer growth. All were sown and planted out at the same time.

In Cucumbers, we have found—

Weedon's Symmetry a very good black spine, growing from 18 to 20 inches in length, with a rather long heel, but a very good cropper for frame-work.
Ipswich Standard, black spine, an excellent one for winter work in houses or in pits on trellis, being a very prolific variety and a good setter. It is also an excellent Cucumber for frame culture in summer, but does not produce such fine fruit as when grown on a trellis, or in a house.
Wheeler's Improved Sion House, white spine, an excellent variety for winter work, and the best of all the Sion House class; also a very prolific Cucumber for frame culture, crisp, and of good flavour.

LIGHT—ITS INFLUENCE ON VEGETATION.

(Continued from page 204).

THE influence which light exercises on vegetation and on vegetable products is in no instance more clearly demonstrated than in the cultivation of fruit, where, as a conditional law, *flavour* must be combined with size and colour, to form the highest examples of horticultural skill. It is to the late President of the Horticultural Society—T. A. Knight, Esq.—that we are mainly indebted for having directed attention to the importance of light to fruits grown under glass, as well

as in the open air, and many of his interesting experiments in cultivation and the construction of glass houses had a direct reference to this important end.

I need not point out to the grower of fruit under glass the absolute necessity of his trees or plants having their full share of light, as this fact is fully substantiated. The superiority of houses for fruit culture, where a large portion of the light which falls on the roof is enabled to pass through, is seen by the excellence of the productions grown under them in comparison with others, where the heavy materials of the roof and small squares of glass cause a considerable portion of the sun's rays to be reflected or thrown back, and therefore useless for every purpose connected with the well-being of the plants within the house. I may, perhaps, here notice, as affording evidence on this part of my subject, the iron and glass forcing-houses in the Royal Gardens at Frogmore, whose productions are unequalled, the new houses at Arundel Castle, and Pennant Castle, Bangor, which are all nearly alike as regards materials and construction, and which are known to produce some of the best specimens of fruit exhibited.

As regards the *form* of houses for fruit growing, here again the angle at which the roof is placed is a point which should be carefully studied, and on which there can be no doubt that, where fruit is to be ripened much out of its natural season—*i. e.*, either very early, or late—houses with a considerable angle of elevation are preferable, on account of their admitting more light at those periods of the year to houses with flatter roofs. Lean-to houses we consider better adapted for forcing-houses than those having *span* roofs, not so much in respect to the quantity of light which passes into them, as in their longer retention of the heat which enters with light, and which, as every gardener knows, escapes more rapidly from houses having glass on all sides, than from those having only glass on one side, and that facing the south.

The colouring of fruit depends not altogether on the direct action of light on the fruit itself, but on the vigour and consequent healthy action of the leaves, from which source fruits draw the principal part of their support; but they have in addition the power within themselves of organising those peculiar products which give to each particular kind of fruit its value; all, however, depends on the healthy action of the parts engaged in forming these secretions, for neither can a high or deep colour, nor yet first-rate flavour, be imparted to fruit, if the leaves are unhealthy, and incapable of producing organizable matter of a healthy character. To carry out, therefore, the ripening of fruit to its highest point of excellence, the leaves, from their earliest development, must be kept fully exposed to light, to ensure the healthy action of their organs in furnishing an abundant supply of the necessary food for the fruit while in a young and growing state; and as the fruit approaches maturity, light, and a more full exposure to air than what may even be necessary during the period of growth, should be admitted, to enable the vital force within the fruit itself to perform the changes requisite to give flavour and proper consistence to its component parts. To effect this more effectually, fruits should, if possible (I here allude to forced fruits), be allowed to ripen slowly, that the processes whereby their

characteristic qualities are obtained may have time to be formed without being hurried, and the fruit consequently may attain its fullest development of size, colour, and flavour.

(To be continued.)

ROYAL BOTANIC SOCIETY, REGENT'S PARK.

JULY 9.—This, the last meeting of this Society for the season, was a most successful one. We do not remember to have seen plants exhibited so fresh in July on any previous occasion. Fruit was also in great abundance, and contained many excellent examples of superior culture.

The prizes were very generally awarded to the same exhibitors that have been successful at the previous shows, which have been fully reported by us: we shall, therefore, on this occasion confine our remarks principally to subjects not before exhibited.

The Messrs. Veitch sent a very interesting collection of new plants, conspicuous amongst which was the new scarlet Delphinium cardinale; four spikes of this handsome plant were sent: Gesnera Miellezi; this resembles an upright Gloxinia, with a creamy white tube, the top of which is of a rosy lilac colour and very pretty: Eucharis amazonica, an Amaryllidaceous plant, shown before as E. grandiflora; it has beautiful white flowers, which are large in size and very showy. The Messrs. Veitch also exhibited flowering plants of Leptodactylon californicum, Philesia buxifolia, and Sonerila margaritacea: these last named have been made familiar to our readers by our artist, Mr. Andrews. Messrs. Veitch also sent a plant of the beautiful shrub Desfontania spinosa (in flower), a new Burlingtonia, cut specimens of the pretty Rhododendron Princess Royal, and a plant of Topping's light Pelargonium Clarissa, described in our last number.

The most remarkable new plant in the entire exhibition was Clematis lanuginosa pallida, a noble specimen with numerous flowers, from Messrs. Standish and Noble, Bagshot. This was figured by us in 1854. The same firm also sent 12 blooms of a new Hybrid Perpetual Rose named Victor Trouillard, being of the rich deep shade of colour of the old Tuscany, but like Géant des Batailles, from which it was raised, the colour soon fades. It is very dissimilar to existing varieties, particularly of the Hybrid Perpetual class. Mr. Glendinning, of the Chiswick Nursery, sent plants of Abies Kæmpferi, and other new plants, both in and out of bloom; the most conspicuous among the former were Erica Spenceriana, and Mandirola Roezli, a plant resembling a Gesnera in habit; as exhibited, it was dull in colour—a shaded lilac. Mr. Taylor, of Streatham, sent a small but well-bloomed plant of his new striped Azalea striata formosissima, which is an excellent variety.

Verbenas were shown in a cut state by Mr. G. Smith, Mr. C. Turner, and Mr. Weatherill, in good variety and condition. General Simpson, Standard Bearer, Jaquinta, John Edwards, Victory, Gloire de France, Reine des Amazones, Mrs. Halford, Noel, Duke of Cambridge, Blue Bonnet, and Lord Raglan were very distinct and good.

In new bedding plants, the most remarkable was a collection of shrubby Calceolarias from Mr. Turner. These were raised by Mr. Cole, and are of almost every shade of colour—selfs, blotched, and spotted flowers—from white to dark maroon. It should be mentioned that these are more effective for pot plants, both for the home stage and for exhibition, than the herbaceous kinds, and the majority of them are well adapted for bedding-out purposes.

Mr. Hally, of Blackheath, sent two variegated-leaved Geraniums—Burning Bush and Scintillatum—but not being in bloom no opinion could be formed of their merits.

Messrs. Henderson, of the Wellington-road Nursery, St. John's Wood, sent Tydæa amabilis. This is one of the class of plants between Achimenes and Gloxinias; free-flowering like the former, and appears to be of easy culture; the flowers are rosy crimson, beautifully spotted.

Mr. Parsons, gardener at Danesbury Park, near Welwyn, exhibited a seedling Achimenes named Vivid—a pretty, distinct, new variety; colour, bright carmine.

Pinks were shown very good. Dr. Maclean, of Colchester, took a first prize for 12 blooms in the Amateur class, with varieties all of his own raising. Dr. Maclean also exhibited several seedlings, the best of which were Purity, William Hale, and Essex Buck. Mr. Bragg, of Slough, sent a pretty bright variety named Venus; it is too thin, and a little serrated on the edge.

Cut Roses were exhibited in very fine condition by the Messrs. Paul, of Cheshunt; Mr. Francis, of Hertford; Mr. Mitchell, of Piltdown; and Messrs. Lane, of Great Berkhampstead. In the Amateur Class, by Miss Palmer, Portland Place; C. M. Whittington, Esq., Caversham; and Mr. Hume, gardener to R. Hanbury, Esq., Ware. Many of the varieties were exquisite. We should give the preference to General Castellane for shape; for colour, to General Jacqueminot and Lord Raglan. Some of the light kinds were very double, and of the most approved form.

Several new Grapes were shown. Mr. Snow's Muscat Hamburgh is a fine addition, being of the most pleasant rich flavour. Three bunches of a new white Grape, Marchioness of Hastings, were of an immense size. These were from Mr. Mitchell, of Brighton.

THE SUMMER PRUNING OF FRUIT TREES.

THE advantages of summer pruning have of late years been so repeatedly pointed out, that it may appear to some perhaps almost unnecessary to insist further on it, or to repeat what has already been so often said before. I, too, should be of this opinion were the practice now universal; this, I am compelled to say, is not the case. I therefore hope that a few remarks on the subject will not be deemed mistimed.

The importance of solar light and air in motion to vegetation is now

generally admitted, and yet how often do we see all the young wood left until what is called the winter pruning, not only on Gooseberry and Currant bushes, but on standard Apple, Pear, and Plum trees. Peach, Nectarine, and Apricot trees fare a little better; but in general much more wood is retained at the summer pruning than is required for next season. The air should freely pass round every portion of wood retained on trees, whether standards, dwarfs, trained or untrained, and solar light should directly reach the surface of every leaf. When the wood or leaves are so close as in any manner to obstruct these (the free circulation of air round the wood, and the direct action of solar light on the leaves), the consequences are that even in the most favourable seasons the wood does not get properly ripened, and in unfavourable ones it is much less matured. To retain, therefore, any superfluous shoots at summer pruning is very bad practice, as they prevent the wood that is wanted for next year from being properly ripened; and unless the wood is thoroughly matured it is in vain to expect good crops of fruit. Unless every leaf receives the full influence of solar light, and unless air in motion pass freely about every part of the tree, we cannot secure well-formed buds; even then we must always keep the leaves clear of insects, so that their functions be not in the least impaired. If we wish annually to have good crops of fruit, we must timely and properly attend to the summer pruning of our trees; and we must not limit this operation to our Peach, Nectarine, and Apricot trees, nor to our Apple, Pear, and Plum trees, but must extend it to every tree of every description, from which we expect a crop of fruit. Instead of Gooseberry and Currant bushes being summer pruned in general, it is quite exceptional. I am perfectly aware that all this summer pruning occurs at a time of the year when there is an accumulated demand of absolutely necessary and immediate requirements on the too often rather limited labour which a gardener has at his command. This it is, I know, which sometimes causes that work, which, though at that time it may not be so immediately urgent, but which, nevertheless, is oftentimes of much more consequence, to be postponed. And as a matter of course, not being done at the proper time, it is not done until winter, consequently the wood is never in such case properly ripened; and trees, when the wood is not ripened, always suffer more from insects; and the young shoots from unripened wood, if summer pruning is neglected, stand a still worse chance of ripening. When this goes on year after year it is in vain to expect crops of fruit. No matter, then, how "immediate and urgent" other work may be at the time, the summer pruning of fruit trees of every kind must be attended to properly. It is labour well bestowed, and when trees get into a healthy bearing state, full of ripened and fructiferous wood, they will require but very little summer pruning. It is when this is totally neglected, that trees that bear little or no fruit put out a forest of shoots instead.

POMONA.

MESSRS. LANE AND SON'S NURSERIES, GREAT BERKHAMPSTEAD, HERTS.

THERE are few of the gardening world who have not heard of the magnificent pot Roses and greenhouse Azaleas exhibited by this firm at our Metropolitan and other flower shows. Their nurseries during the blooming season of these plants will well repay a visit, while for the past month their extensive Rose grounds have been one mass of bloom. Their stock of Roses is perhaps one of the largest in this country, and comprises all the most esteemed varieties in cultivation. Of Hybrid Bourbons we noticed a fine stock, amongst the best of which Paul Perras, Paul Ricaut, Chenedole, and Coupe d'Hebe were pre-eminent. The Hybrid Perpetual Roses are, however, the most extensive class, and on account of the length of time during which they continue to bloom are the most desirable to cultivate. Of these a long list might be given; we must content ourselves only to name such varieties as we consider very superior. Of deep crimsons the new Rose, General Jacqueminot, Géant des Batailles, and Empereur Napoleon III. are very striking; these are Roses which, as Mr. Lane expresses it, warm you to look upon them. Of pink and rose coloured varieties Jules Margottin, Madame Domage, Chereau, Madame de Cambaceres, Madame Hector Jacqueler, Duchess of Norfolk, Comtesse Vaillant, Colonel de Rougemont, and Baronne Heckeren are amongst the best. Of Bourbons there are many very splendid varieties: Apolline, Aurore de Guide, Francois Henrincq, Louis Odier, Sir J. Paxton, and Souvenir de la Malmaison. The Tea-scented, though somewhat tender, deserve every attention to bring them to perfection. Messrs. Lane's stock of these is particularly good; Adam, Canari, Comte de Paris, Devoniensis, Gloire de Dijon, Madame de St. Joseph, Madame Melanie Willemorz, Moiré, Narcisse, Souvenir d'un Ami, and Vicomtesse de Cazes are all very beautiful. Long beds of the above, and many other splendid varieties, were in most luxuriant health, and covered with bloom, the fragrance of which completely loaded the atmosphere. They are worked in a great variety of shapes—dwarfs, pillars, and standards, the latter so high as seven and nine feet, the tallest of which are much in demand for covering high walls, &c., for by the aid of such plants it is possible to cover such places at any time.

Of forest trees Messrs. Lane's young stock is very extensive and good; this will easily be understood when we state that their nurseries consist of about 60 acres of land which is well adapted for the purpose.

Coniferous plants are propagated in large quantities. The more common are sown in beds in the usual way, after which the surface is thinly covered with chopped Furze; this answers the two-fold purpose of preventing excessive evaporation during the summer, and of protecting the young plants from cutting wind during winter and the early spring months. Of Araucaria imbricata Messrs. Lane's stock is the largest we have seen; many of the plants are large and handsome; seedlings of the present season amount to several thousands, and are now growing freely in a cool greenhouse. When these plants can be

propagated so freely from seed it may be a matter of surprise that any other means should be adopted. For certain purposes, however, plants struck from cuttings are very useful, for by this means quite another habit is acquired: instead of the erect symmetrical plants which we have from seed we have dwarf trailing plants which are admirably adapted for planting on rock-work, &c. Messrs. Lane have long directed their attention to this fact, and are now in possession of a nice stock of such plants.

American plants are very extensively grown. There are large quantities of Rhododendrons, Azaleas, Kalmias, Andromedas, &c., all of which are very healthy, and have been one mass of bloom; in fact, some of the late varieties of Rhododendrons were still so. Standard Rhododendrons, so much in demand for planting singly on lawns and a variety of purposes, are here in great numbers; as are also standard Bays and Portugal Laurels—the latter full of flowers, which have a pretty effect.

Plant-houses and pits, as may be supposed, are very numerous: besides those for specimen plants, there are a number for the young stock of stove and greenhouse plants. Achimenes, Gloxinias, Pelargoniums, &c., are here in their newest and best variety; their young stock of greenhouse Azaleas is the largest we have seen, and remarkably clean and healthy.

For specimen Azaleas three large span-roof houses are devoted. The Messrs. Lane have long been celebrated for the culture of such plants; at the present time these, like their young stock, evince the best of management. Of the more rare, we noticed fine plants of Alba melior, considered one of the best white Azaleas in cultivation; Beauté de l'Europe, a very pretty carnation-striped variety; Chelsoni, one of the best in the way of Perryana: there are also some fine plants of Azalea Lanei, a seedling of Messrs. Lane, which they consider by far the best white Azalea in cultivation. Of old varieties they have magnificent plants of Conspicua purpurea (a very showy variety, the flowers of which have sometimes measured five inches in diameter), Duke of Devonshire, Iveryana, Murrayana, Perryana, Rubra plena (a very large plant), Variegata, Gledstanesi, and many others; we also noticed several plants on which three and four varieties had been worked together—these, when in flower, are very pretty. In one of the Azalea houses we noticed remarkably fine plants of the two varieties of Rhododendron javanicum; they are each about four feet high, bushy, and well clothed with foliage to the pot's rim—a condition in which they are rarely met with.

Messrs. Lane's stock of orchard-house plants cannot possibly be surpassed. There are four span-roof houses devoted to this branch of plant culture, the largest of which is 150 feet by 24, and it is now intended to extend it to 300 feet, in order to meet the demand for these trees. One house is specially devoted to fruiting plants; it contains most of the best varieties of Peaches, Nectarines, Apricots, Plums, and Cherries, besides several new or little known fruits, which it is the object to test: we noticed plants in ten-inch pots of the Kaisha, Moor Park, and several other Apricots, loaded with fruit—in fact, this

was the case with the whole contents of the house. In their large house are planted all the known varieties of Hamburgh Vines. These, it is expected, will not only furnish a supply of Grapes, but also a quantity of "eyes," from which a stock of young plants can be propagated and kept under their proper names. The stock of young trees in pots in this house is in excellent condition. Out of doors, there are large quantities of Pears, Plums, Gooseberries, and Currants, also in pots, and many of them loaded with fruit.

Messrs. Lane have long been known as among the most persevering and ardent lovers of good gardening, at the present time there is every appearance of their long retaining their high standard; everything, both in their plant-houses and grounds, evinces the best order and good management, and we have to thank them for the very kind manner in which they allowed us to inspect every part of their establishment.

THE PINK.

KNOWING as we do the estimation in which this sweetest, as well as oldest and most interesting of Florists' Flowers is held, we have, by permission of the proprietor, introduced the following remarks by "J. H. B.," from the "National Garden Almanack" for the present year. As we know the discriminating taste of "J. H. B.," he will be found a safe guide, and we hope in a future number to give our readers the result of his experience of the present year's bloom.

"If we examine the whole catalogue of Florists' Flowers, I question if we shall find one more improved of late years than this lovely favorite.

"When we remember the fringed mop of Dry's Earl of Uxbridge, or Pigott's Earl of Cheltenham; the confused colouring of Unsworth's Omega, or Blackheath Hero; and the uncertain lacing of Akers' Lord Brougham, or Barrett's Conqueror, all acknowledged favourites a few years since, and contrast them with the fulness and compactness of Ward's Great Britain, or Turner's Duke of Devonshire, the solid edging and lovely colours of Mrs. Norman or Maclean's Criterion, or the dense margin of Norman's Colchester Cardinal, we cannot fail to be struck with the great advance made by this flower, and although we must allow perfection has not been attained, yet we cannot certainly deny that immense strides have been made in that direction.

"Among the first (in my remembrance) improvers of this flower, Mr. John Sharp, of Clop Hill, near Selsoe, Bedfordshire, must be named, as with Splendid and Wm. Cobbett; he gave us the first indication of that breadth and smoothness of petal, we have since seen so much more fully carried out; Mr. Garrett gave us a still further improvement with Alpha, and Queen of Roses; Mr. Hodges gave us Gem and Melona, and Mr. Creed, of Woolwich, gave us President, a further advance in the right direction.

"Mr. Cousins, of Welling, with Little Wonder, and James Cousins followed well in this road, and Mr. N. Norman, of Woolwich, in con-

tributing Henry and Duke of Wellington, made a vast stride in advance of his contemporaries.

"Mr. Solomon Hale, of Hillingdon, gave us Queen of England, a flower which for refinement of style and precision of marking was unrivalled. Mr. E. Stow, of Chiselhurst, gave us Elizabeth, one of the best dark edges of its day, and Mr. Meade, of Lewisham, contributed Blackheath Rival, a James Hogg on a small scale.

"Mr. Smith gave us Diana, Whipper-In, Goliath, &c. &c., and Mr. Read, a neighbour of Mr. Sharp, of Clop Hill, gave us Jenny Lind (wrongly called Harrison's), which to other good qualities adds that of its prolificacy, as a numerous progeny (among which Kossuth, Ada, Bertha, &c., are worthy of note) fully shows.

"Dr. Maclean, of Colchester, gave us Narborough Buck, Criterion (aptly named), Narborough Nymph (now I fear lost), and later, New Criterion, and Purity, two of the best Pinks in cultivation; while Dr. Norman, of the same neighbourhood, has given us Colchester Cardinal (a perfect gem), and Mrs. Norman, a flower which for breadth of petal is unrivalled—while Messrs. Bragg and Turner, of Slough, and Keynes, of Salisbury, have of late years done the cause good service, the former with Jupiter, Koh-i-noor, James Hogg, Hercules, &c. &c. Mr. Turner with Optima, Esther, Sarah, Perfection, Richard Andrews, &c. &c., and Mr. Keynes with Mrs. Wolfe, Mrs. Lewis, &c.; nor must we omit, while on the subject of Pink improvers, the name of Mr. Marris, of Leicester, who in giving us Theresa, Theodore, and Geraldine, has insured the knowledge of his name, at least for some years, in our locality.

"The north has hitherto been singularly backward in producing any worthy Pink novelty—Mrs. Burman, of whom we were promised such *great* things, proving too *little* for anything useful; but even the north has at length made a step in the right direction, and in giving us Elizabeth Gair, Mr. Lightbody has chronicled himself as another Pink grower's friend. The south has had worthy representatives in the Chatham growers, and while Mr. Eldridge has evinced his predilection for the yacht line of business in naming his seedlings Volante, War Hawk, Alarm, &c. &c., they have by no means disgraced their namesakes' aqueous reputation. Central Kent was worthily represented by Mr. Hardstone, of St. Mary Cray, whose last contribution was Fanny, a very *fair* specimen of a Pink. (I regret to say *was* represented, as I have just heard of his rather sudden death, on the 22nd October. The Pink, Tulip, Carnation, and Picotee world, have sustained a considerable loss in the person of this persevering old florist; may his son follow worthily in his footsteps.)

"Mr. Looker, of Oxford, must by no means be *overlooked* in these remarks, for whether we take old flowers, or new ones, he seems equally in the foremost rank. Of the former, Jane Sarah, Glory of Oxford, and Duchess of Marlborough, were excellent representatives; while, in novelties, John Stevens, Juliet, Mr. Hoyle, Mr. Hobbs, &c. &c., bear conspicuous places; and if Mrs. Stevens prove to be only as great a *trimmer* as report says she is, her possessor may congratulate himself on having added at least an A 1 to the Pink catalogue.

"Yet with all these improvements, and no one can deny that they are improvements, I miss the *dense* black and *wire* edge I so well remember on Aker's Lord Brougham, Ibbot's Captain Dean Dundas, and Keynes' Ne Plus Ultra: and while our growers are conning over these few rambling and discursive remarks, I can only say, if they are fortunate enough to produce a flower combining these qualifications, with the present breadth of petal, fulness of flower, and smoothness of edge, no one will be more ready and willing to chronicle their success, and rejoice at their good fortune than

"J. H. B.

"I append a list of the best thirty-six Pinks cultivated by me in the past season.

New Criterion (Maclean).	Criterion (Maclean).
Mrs. Norman (Norman).	Jupiter (Bragg).
James Hogg (Bragg).	Theresa (Marris).
John Stevens (Looker).	Mrs. Lewis (Keynes).
Richard Andrews (Turner)	Lord Charles Wellesley (Bragg).
Elizabeth Gair (Lightbody).	Fanny (Hardstone).

Mr. Hobbs (Looker).	Colchester Cardinal (Norman).
Koh-i-noor (Bragg).	Hercules (Bragg).
Alarm (Elridge).	Ada (Read).
Brunette (Maclean).	Great Britain (Ward).
Criterion (Ellis).	Juliet (Looker).
Field Marshal (Hale).	Mr. Hoyle (Looker).

Duke of Devonshire (Turner).	Adonis (Maclean).
Sarah (Turner).	Perfection (Turner).
Esther (Turner).	Optima (Turner).
Sappho (Colcutt).	Louisa (Phillips).
Mrs. Wolfe (Keynes).	Colchester Buck (Norman).
Favorite (Hudson).	Titus (Edwards).

"Our kind contributor, an amateur florist, has been no less happy than just in his retrospective and recommendatory hints on Pinks. [J.E.]"

THE APPLE CROP OF 1856.

THE crop is this year a very thin one in Yorkshire, considerably below the average. This is what I anticipated from the very heavy crops of last year, which not being thinned, robbed the trees of all their nutritious matter, so that a season of rest is required to store up sufficient for another heavy crop, to be followed by another season of rest. To remedy this state of things, I have advocated a proper system of culture, such as thinning of spurs, buds, fruit, &c. Our orchardists attribute the failure of their crop to our late spring frosts, and not to their own mismanagement in letting the trees go unpruned and uncared for, never thinning the fruit when the crop is very heavy. In America they have their "bearing year" and season of rest in neglected orchards, but they do not, as we do, attribute it to late spring

frost. Downing, in his work, the "Fruits and Fruit Trees of America," treating on orchard culture, says, "The *bearing year* of the Apple, in common culture, only takes place every alternate year, owing to the excessive crop which it usually produces, by which they exhaust most of the organisable matter laid up by the tree, which then requires another season to recover, and collect a sufficient supply again to form fruit buds. When half the fruit is thinned out in a young state, leaving only a moderate crop, the Apple, like other fruit trees, will bear every year, as it will also if the soil is kept in high condition. He adds in a note, "One of the finest orchards in America is that of Pelham farm at Esopus, on the Hudson. It is no less remarkable for the beauty and high flavour of its fruit, than the constant productiveness of the trees. The proprietor, C. J. Pell, Esq., has kindly furnished us with some notes of his experiments on fruit trees, and we subjoin the following highly interesting one on the Apple:—'For several years past I have been experimenting on the Apple, having an orchard of 2000 bearing Newtown Pippin trees. I found it very unprofitable to wait for what is termed the 'bearing year,' and it has been my aim to assist Nature, so as to enable the trees to bear every year. I have noticed that from the excessive productiveness of this tree, it requires the intermediate year to recover itself—to extract from the earth and the atmosphere the materials to enable it to produce again. This it is not able to do, unassisted by art, while it is loaded with fruit, and the intervening year is lost. If, however, the tree is supplied with proper food it will bear every year; at least such has been the result of my experiments. Three years ago, in April, I scraped all the rough bark from the stems of several thousand trees in my orchard, and washed all the trunks and stems within reach with soft soap; trimmed out all the branches that crossed each other, early in June, and painted the wounded part with whitelead, to exclude moisture and prevent decay. I then, in the latter part of the same month, slit the bark by running a sharp pointed knife from the ground to the first set of limbs, which prevents the trees from becoming bark-bound, and gives the young wood an opportunity of expanding. In July I placed one peck of oyster-shell lime under each tree, and left it piled round the trunk until November, during which time the drought was excessive. In November the lime was dug in thoroughly. The following year I collected from these trees 1700 barrels of fruit, part of which was sold in New York for four and others in London for nine dollars per barrel. The cider made of the refuse, delivered at the mill two days after its manufacture, I sold for $3\frac{3}{4}$ dollars per barrel of 32 gallons, exclusive of the barrel. In October I manured these trees with stable manure in which the ammonia had been fixed, and covered this immediately with earth. The succeeding autumn they were literally bending to the ground with the finest fruit I ever saw, while the other trees in my orchard not so treated are quite barren, the last season having been their 'bearing season.' I am now placing round each tree one peck of charcoal dust, and propose in the spring to cover it from the compost heap.'"

If time and space allowed, I could make many more extracts from this work to show that in America orchards, when neglected, bear crops

every alternate year only; but where under proper culture they bear every year. When our orchardists imitate the labour and perseverance of this American gentleman, who takes so much pains with his Newtown Pippin trees, then may we hope to hear no more outcries as to the failure of our crops.

M. SAUL.

SHRUBBY CALCEOLARIAS.

A VERY great improvement has lately been effected in this most useful decorative plant by Mr. Cole and others who have devoted some attention to hybridising for the purpose of obtaining improved varieties. We have this season bloomed a full collection in pots for the purpose of testing their respective merits, and ascertaining which of them are most useful for bedding uses. Many of them have proved most valuable for this purpose, others are only suitable for pot culture, and are not shrubby enough in habit to stand the wear and tear of out-door work, and give a succession of bloom for the season. Our aim now is to give some account of all the varieties we have grown, and particularly to show which are really useful as bedding plants. And with regard to the culture of Calceolarias in pots, our opinion is, that the shrubby varieties are far superior to the herbaceous kinds for pot culture. In habit, and in duration of blooming especially, they are greatly superior, as they yield a succession of flowers for the season, while the herbaceous varieties do not remain in bloom half so long. They are also not so subject to green-fly. The shrubby varieties are very easily grown from cuttings, and require much less attention in wintering, as well as in their culture. Our method of growing them is this:—The plants are just cut down from which cuttings will be taken in September. During the winter they will be kept in dry cold frames or pits, provided with small hot-water pipes in front to keep out frost and damp, and the plants will be kept as near the glass as possible, to prevent drawing. They should be kept *well aired* and hardy, and quite free from green-fly by repeatedly fumigating them. Especial care should be taken to keep them growing, and not allow them to receive a check, either from want of water, too much water, or any other cause. The soil we use consists of maiden loam, leaf-mould, and sand, mixed in a rough state, and not sifted. The plants should be stopped two or three times at various periods, and shifted as required, and 8-inch pots are quite large enough for full-sized specimens. *Plenty of air, kept growing, and cleanliness* are most important points to be kept in view.

Albira (Cole), yellow with brown spots, very free blooming, of shrubby habit, but more suitable for pot culture than for bedding.

Ajax (Pince), brownish red with yellow margin, very large and showy, but only fit for pot culture.

Attraction (Perkins), crimson with orange margin and cap; a very good variety for pot culture.

Brunettia (Henderson), like Crimson King.

Beauty of Montreal, bright light crimson, small flower, but a free blooming and good variety for bedding.

Crimson King, deep crimson, large, and of rather tall habit, yet one of the best crimsons for bedding.
Cotton-ball, a white variety of no value.
Correggio (Henderson), large brownish crimson, best for pot culture.
Desirable (Perkins), bright crimson, a good variety for pot or bedding.
Don Saturnio (Henderson), orange brown, large flower, best for pot culture.
Don Francisco (Henderson), dark crimson, Sultan habit, best for pot culture.
Eclipse (Rollisson), bright crimson scarlet, a very fine variety, but unfortunately not a free grower.
Ethel Newcome (Henderson), yellow, not so good as many others.
Erecta, rich yellow, *a first rate bedding variety* with stiff footstalks, very bright, and of good habit. Different shade of colour to any other.
Emperor Napoleon (Youell), orange crimson with yellow margin, large; a good pot variety.
Empress Eugenie (Youell), large yellow, only fit for pot culture, and of not much value.
General Canrobert (Henderson), rich rosy crimson, a very good pot variety, but not for bedding out.
General Pelissier (Henderson), light crimson, Sultan habit, very good for bedding or pot culture.
Goldfinder (Cole), rich yellow, a fine bedding variety of good habit.
Golden Cap, brown and yellow with yellow cap, dwarf habit, best for pot culture.
Hawk (Cole), orange, densely spotted with large brown blotches, very bright, and of good habit; a good bedding variety, and an excellent pot plant.
Harlequin (Cole), dull-orange and brown, spotted, novel in colour, but only fit for pot culture.
Heywood Hawkins, a half shrubby variety, in colour and marking somewhat similar to Hawk, but not so desirable.
Kayi, yellow, a well known and useful variety.
King of Sardinia (Cole), rich crimson, large flower, dwarf and good habit, and a free bloomer, *very fine*. The best of all the crimson varieties for bedding purposes.
Kentish Hero; this variety is well known.
Lemonade (Cole), pale yellow, an excellent bedding variety, and best late.
Lady Isham (Perkins), reddish brown edged with yellow, best for pot culture.
Maggiore (Henderson), dark brownish crimson, like Red Rover and Wildfire.
Minnie (Henderson), bright scarlet crimson, small flower, very free, but not a strong grower.
Norma (Henderson), large dark brownish crimson, Sultan habit.
Negro (Nelson), of Sultan habit and the darkest of all, only fit for pot culture.
Orange Perfection (Cole), soft pale orange, an exceedingly beautiful and valuable variety for bedding or pot culture, and very distinct.
Orange Boven (Cole), bright brownish orange, dwarf habit and a free bloomer, good for bedding.
Pallida (Cole's), pale canary yellow, very free, distinct and good for bedding.
Pilot (Cole), crimson brown, small flowers and very free, best for pot culture.
Prince of Orange (Cole), bright orange brown fading to light orange, very dwarf habit, and an immense bloomer. This is a most valuable bedding variety, and should be generally grown.
Pygmæa (Perkins), brown and orange, Sultan habit, not worth growing.
Rosy Morn, dark crimson, something like Crimson King.
Red Rover (Henderson), like Wildfire.
Sir Charles Isham (Perkins), crimson with orange cap, dull colour, of not much value.
Surprise (Henderson), very much like Correggio.
Sultan, rich dark crimson, fine for pots, but superseded by King of Sardinia for utility.
Shirley (Henderson), pale yellowish brown, something of Prince of Orange habit, and not so useful.
Purity (Cole), clear white and free blooming. This variety is very fine out

of doors, if autumn-struck plants are used, and not allowed to grow too freely. A somewhat dry situation suits it best.
Shankleyana, very like Kentish Hero, but darker.
Superb (Turner), very dark, of good dwarf habit, and a good bedding variety.
Variabilis (Rollisson), creamy white, of no value.
Wellington Hero (Henderson), deep yellow, large flowers, and very free; a very good variety, but Goldfinder is an improvement on it.
Wildfire (Henderson), brownish crimson, large flowers, best adapted for pot culture.

There are a few other old varieties that we have not enumerated, as they are so well known. The best, in our opinion, for bedding purposes are—

Yellow.—Erecta, creamy yellow.
Goldfinder, deep yellow.
Lemonade, pale yellow.
Pallida, pale yellow.
Orange.—Orange Perfection, soft pale orange.
Orange Boven, bright brownish orange.
Prince of Orange, bright orange brown, fading to light orange.
Brown—Kentish Hero.
Crimson.—King of Sardinia, rich dark crimson.
Beauty of Montreal, bright light crimson.
Superb, very dark.

These are a few first-rate varieties for out-door purposes. In planting beds of yellow Calceolarias, we have found Superb an admirable border to a bed of bright yellow, or Prince of Orange a good border to King of Sardinia or any other dark variety. With regard to Prince of Orange, it is an invaluable variety, and should be grown generally, and Erecta is a first-rate yellow variety, that is not sufficiently known.

PLEROMA ELEGANS.

THIS is one of the most beautiful summer and autumn-flowering plants in cultivation; there is a neatness in the glossy green foliage and compact habit of well managed plants of it, that is at all times pleasing. And if we add to this the large round dark purple flowers, which are produced on every branch in great abundance, we shall find that we have few plants more attractive.

The culture of this Melastomad is so simple that any one, with a little attention to its wants, may have good plants; still with this, as with other things, it is an easy matter for them to get into ill health, and when that happens it requires some time and skill to induce a free growing condition. Neglect in stopping the shoots, tying them out, or repotting, as the case may be, or even a lack of water for a few hours, when the pots are full of roots and the plants in vigorous growth, are each sufficient to spoil a plant for a season. Many, too, commit the mistake of allowing plants intended for specimens to flower when too young; when this is done, there is little chance of producing first-rate specimens, particularly with such plants as the Pleroma. The

object should be, first, to obtain a good foundation, by carefully stopping and tying out the branches. When this is properly done, the greatest art of plant-growing is complete. On the other hand, if these points are neglected when the plants are young, no after care will compensate for the omission.

The Pleroma may be propagated either by means of seeds or cuttings; if the latter, a little practice is requisite to be able to insert them at a proper time. They will not root readily if the wood is allowed to become too ripe; and on the other hand, if too young, there will be the danger of damping. Those who have been accustomed to propagate the Azalea will probably find little difficulty with this plant.

Supposing we have young plants in February or early in March, they should be placed in a growing temperature—say about from 45° to 55°. A suitable place for this and many other plants intended for specimens, such as Leschenaultias, Eriostemons, Boronias, &c., is a pit heated with a hot-water pipe, to apply a little heat in cold, damp weather. In such a situation they can be kept near the glass, to enjoy the light and a circulation of air, or shaded from bright sun, as the weather may require. In such a situation they will soon commence growing freely, and should be carefully potted in pots a size or two larger, as the amount of roots may seem to require. It will be better, however, to give a rather small shift until the plants are fairly started into growth; when such is the case, liberal shifts may be given at intervals of six or eight weeks, giving the final potting for the season in July, as it is better for the pots to be rather full of roots during winter. Stopping the shoots should also be discontinued after the first week in July, and attention paid to having the growth well matured before the dark days of autumn. This done, the Pleroma may be wintered in the greenhouse, if the temperature is not allowed to fall below 40°. It should be placed so as to receive a good amount of light and air, without incurring cold draughts.

If the plants are required in bloom in the early part of the summer, they should not be repotted in spring; but for plants to bloom in August and September a good shift should be given in March, and the shoots regularly stopped about a month later. By following the practice of stopping and potting at different periods, this plant may be had in bloom for three or four months together at a time.

J. SHUTER.

PINKS.

THE Pink bloom this year has been very fine,—unusually so. Almost every variety produced large well-laced flowers, there being scarcely a failure out of the hundred kinds grown here. The season has, however, been much in their favour, particularly the spring months, for, if it prove an adverse one, the most careful treatment will fail to produce that uniform fine bloom we have just experienced in every part of the

country. Many entertain the idea that the application of manure-water adds to the colour and quality of lacing. It is true this will help them during a dry season, but this year none has been applied by me, and I never before saw Pinks bloom so finely. If the beds are made rich, and also have some rotten manure trenched in the ground when they are planted, and carefully top-dressed in early spring—say, about the beginning of March—with good rich soil, but little manure-water will be required. Experience proves that manure water used in excess is injurious to the young stock, causing the foliage of many sorts to become spotted and sickly, that it should be used or not according to the season, and when its application is resorted to let it be given in a very weak and diluted form. Let it be attentively seen to that the soil for them to grow in is sweet, rich, and good.

The following are the best varieties for exhibition:—Mrs. Stevens, new shade of purple, broad petal, medium size, fine quality, a very fine flower; Adonis, rosy purple, very fine, a variety much improved by being wintered in pots; Mrs. Norman, reddish purple, of very fine substance and petal, requires disbudding to one; Purity, this has been very fine, colour reddish purple, fine quality and full size, a first class show flower; New Criterion, red, fine quality, requires assistance when opening, as the petals sometimes open curly; James Hogg, one of the best, very fine, usually shy to lace, but good in every respect this year: unquestionably one of the finest Pinks in cultivation when bloomed in its best character: it has a broad petal, large, and of fine substance; Optima, dark, very smooth, a full flower, very fine; Alma, red, a large flower, rather full; Colchester Cardinal, red, rather thin, fine quality, requires disbudding hard; Gem of the Season, large petal, and well laced; Admiral Dundas, purple, smooth, and of fine quality, medium size; Peter. Young, red, a thick full flower: disbud sparingly, extra fine; Lady Blandford, rosy purple, a fine full flower: in thinning out leave two buds on each stem; Sovereign, rosy purple, fine; Richard Andrews, rosy purple, rather late, but a fine show flower; Mr. Hoyle, red, very constant; Arthur, purple; Titus, reddish purple, large; Narboro' Buck, violet purple, full flower: leave several buds; Brunette, dark broad lacing, a variety much improved by being wintered in pots; Goliath, red, a very large full flower: disbud sparingly; Sappho, pale red, rather faint in colour, good quality; Purple Perfection, a large full flower, rather pointed petal; Hector, red, a very useful flower; Criterion, dark purple, very fine; Fanny, red, large, and bold; Ganymede, rosy purple, a pleasing flower; Climax, red, very large, leave nearly all the buds; Prince of Wales, rosy purple: disbud to one only, or it will be too thin; Field Marshal, rosy, very constant; John Stevens, violet purple, a little serrated on the edge, but very attractive; Sarah, bright red, broad lacing, and very constant; Mr. Weedon, purple, smooth, and constant; Mrs. Maclean, lilac rose, a very distinct variety; Mr. Hobbs, rosy purple, fine thick flower, full size; Lord C. Wellesley, rose, a very useful variety; Jupiter, purple, rather thin, large petal, and good quality; Elizabeth Gair, small and thin, but very good quality; Harry, dark.

The above are the best varieties to grow for exhibition. There are

a few varieties of Pinks that should be wintered in small pots and planted out in March, as some of them are delicate growers, and there are others which, by adopting this treatment, produce much smoother flowers. The varieties that succeed best treated in this manner are Criterion, Colchester Cardinal, Mrs. Norman, Optima, Sappho, Great Britain, Napoleon, Peter Young, Brunette, Narboro' Buck, Adonis, and James Hogg. In the month of October these should be potted into three-inch pots, a pair in each, or one plant only if a smaller pot is used, and wintered in a cold frame the same way as Carnations. In the beginning of March, if the weather is favourable, they should be planted out into a bed that has had some good rotten manure well mixed in during the winter. In planting them out great care should be taken not to disturb the roots by breaking the ball. In choosing plants for potting or for planting into the blooming beds, medium sized plants are better than large ones, as they winter and bloom better.

Slough. J. S. BALL.

BRITISH POMOLOGICAL SOCIETY.

A SPECIAL meeting of this Society was held on the 17th ult., chiefly for the purpose of testing the merits of some of the newer kinds of Strawberries. Mr. Turner, of Slough, in the chair. Mr. Kitley, of Bath, furnished specimens of his new Strawberry Carolina superba, which was sent out in the autumn of 1854. It is a cross between the Old Pine, or Carolina, and the British Queen. The fruit is large and handsome, frequently measuring five inches in circumference; in colour it is a pale red, even to the point of the fruit; the seeds are small and deeply indented, which gives the surface a rather smooth appearance. The flesh is clear white, very firm in texture, like the Old Pine, and has the fine aroma and excellent flavour which characterise both its parents, while in addition to these qualities it is far more productive than the Old Pine, and hardier than the British Queen. A plant taken from the open ground and placed in a pot was exhibited, and was literally covered with fruit. This variety was highly commended by all present, and there is no doubt that it is a very first-rate and valuable accession to our list of Strawberries. Mr. Underhill, of Birmingham, exhibited his Sir Harry. It is a noble-looking Strawberry, and partakes more of the furrowed cockscomb shape than of heart shape. Its colour is dark red, and, when highly ripened, of a very deep blood red, approaching black. Unfortunately the merits of this fruit could not be discussed, as it had been packed in moss, the flavour of which had been communicated to the fruit, and spoiled its flavour. Mr. Underhill, however, intends sending another supply to the next meeting. Sir Harry was raised between British Queen and Trollope's Victoria. It ripens at the same time as Keens' Seedling, and bears abundantly. Mr. Snow, gardener to Earl de Grey, produced specimens of Myatt's Admiral Dundas Strawberry. It is of a pale reddish-orange colour,

very large size, and inclined to the cockscomb shape; in flavour it was considered to be too acid to be agreeable. Mr. Snow also exhibited two seedling late Strawberries of his own raising, which presented singular discrepancies in quality, and it was therefore considered desirable that he should again produce them at the meeting this month. Mr. Knevett, of Isleworth, sent a basket of a new seedling Strawberry of very large size, one specimen measuring six inches and a quarter in circumference. It is heart shaped, dark red in colour, and the seeds, which are small, almost level with the surface. The flesh is of a deep colour, and tolerably solid for the size of the fruit. It was considered a very good Strawberry for its size, with a flavour which renders it worthy of cultivation, and certainly superior to most of the other large Strawberries which have hitherto been introduced. Mr. Snow again furnished a bunch of his new seedling black Grape, raised from the Black Hamburgh fertilised by the White Muscat. The berries are of good size, varying in form from round, like the Hamburgh, to oval, like the Muscat. The skin is black, and, though not thick, is tough—a property which enables the fruit to hang and bear carriage well. The flesh is melting and remarkably rich in flavour, fully charged with the aroma of the Muscat, and with an unusually high perfume. The number of seeds varies from one to two, and in some cases they are wanting. Mr. Snow having expressed a wish that the Society should name his new Grape, Mr. Hogg proposed that it should be called Snow's Muscat Hamburgh, which was approved of. It ripens as early, and with the same degree of heat as the Black Hamburgh. Mr. Snow also exhibited a basket of remarkably fine specimens of Elton Cherries from a wall, which were greatly admired. Mr. Rivers exhibited specimens of Muscat St. Laurence, a white Grape of the Chasselas or Muscadine family. The bunch is similar to that of the White Muscadine; the berries small, round, and greenish in colour; the skin is thin, flesh very tender and juicy, with a slight trace of Muscat in it. The specimens exhibited were ripened under glass; but Mr. Rivers stated, as its chief recommendation, that it would ripen out of doors as freely as the Sweetwater and Muscadine. Mr. Theodore Von Spreckelsen, Hamburgh; and Mr. Lewis Solomon, of Covent Garden, were elected new members.

HILLINGDON COURT, UXBRIDGE;

THE SEAT OF CHARLES MILLS, ESQ.

MR. MILLS has long been an ardent patron of horticulture, but it was not till within these last few years that he has carried into practice so successfully every branch of gardening, and to so great an extent, as may now be seen at Hillingdon Court. Mr. Constantine, the gardener here, is a most successful grower of forced fruits, plants, and general garden produce. A new mansion has lately been erected, and surrounded with grounds of considerable beauty. A Box garden, designed by Mr. Nesfield, is situated at the east end of the mansion,

and is one of the best we have seen. In the conservatory at the west end of the building was a brilliant display, consisting of Smith's Balsams, many of them very fine indeed; Fuchsias, Pelargoniums, Fancy Pelargoniums, Calceolarias, Scarlet Geraniums, Rhynchospermum jasminoides, Salvia splendens grown on freely in large pots for autumn flowering in the conservatory, and nothing is more showy; Lisianthus Russellianus, very strong and well grown plants, the culture of which Mr. Constantine so well understands; and Scarlet Geraniums Cerise Unique and Commander-in-Chief, two fine varieties for pot culture. Roses and various other plants were also in full bloom.

The forcing department is very extensive, and one of the most complete in the kingdom, Mr. Mills having spared no expense in this particular department as well as in all others. Pines, both turned out and in pots, were very fine and healthy; Queens are chiefly grown here. Peaches were fine, and in one of the Peach houses were specimens of the Stanwick Nectarine, which Mr. Constantine regards as a failure. Vines were in good health and fine. These are grown chiefly in low semi-circular roofed houses, one of them partly devoted to Muscats, promising an exceedingly fine crop. In another was a heavy crop of Black Barbarossa, with very fine bunches from 15 to 20 inches long. The Hamburghs were fine, with from 20 to 21 bunches on each rod; but the Richmond Villa Hamburgh is of very inferior quality, smaller than the Hamburgh, not so rich in flavour, and liable to shrivel, and does not hang so long. Figs are extensively grown here, the White Nerii being the best for an early crop, and Lee's Perpetual is also a good variety.

Strawberries are forced on a somewhat extensive scale, and in a range of pits plants that had been forced into bloom were planted out in good rich soil the first week in April, and fruited abundantly, continuing much longer in fruit than if they had remained in pots. In this range of pits Roberts's tiles were used for fruiting the Strawberries on, and seemed to answer well. Among the out-door Strawberries we noticed Omar Pacha, which here seemed a very thin cropper and of inferior quality; Filbert Pine, one of the finest Strawberries grown, if not the best, of excellent flavour, a free bearer, and best late; Keens' Seedling, Patrick's Seedling, which is a good forcing variety, very prolific, but only second rate in flavour out of doors; British Queen and Scarlet Nonpareil, which appears to be a shy bearer and colours irregularly.

Among Cucumbers grown here Constantine's Incomparable is the most extensively used. This is grown chiefly on trellises, and is a handsome and very prolific variety, from which Mr. Constantine has been cutting since the 1st of January. Wheeler's Improved Sion House is another good variety, and Ipswich Standard and Trollope's King were also very fine.

HORTICULTURAL SOCIETY.

JULY 22.—The Right Hon. T. F. Kennedy in the chair. S. F. Winterbottom, Esq., H. Conybeare, Esq., and Mr. Alderman Finnis were elected Fellows.

Messrs. Henderson, of Pine-apple Place, sent a collection of plants, among which were Cattleya Leopoldi, the prettily spotted-leaved Maranta pardina, two Achimenes, Streptocarpus biflorus, three sorts of Begonias, Impatiens Jerdoniæ (figured in one of our previous volumes),

and the two hardy Conifers, Thuja gigantea and Thujopsis borealis. Of the appearance of the last some idea may be gathered from the above illustration, reproduced from our volume for 1855, page 28. The specimen shown was, however, more compact in growth than that here

represented. The growing interest which attaches to this fine plant has induced us again to bring it prominently under notice.

Messrs. E. G. Henderson, of Wellington Road, contributed a group of plants remarkable for their beautifully variegated leaves, Gesnera Miellezi, described elsewhere, and Tydæa amabilis, the last with clear and beautiful rose-coloured flowers closely dotted over with minute dark spots. The same firm also furnished a collection of Gloxinias, comprising many of the newer and better kinds. From C. Leach, Esq., came a withered flower stem of Buphane toxicaria, one of the most poisonous of Cape bulbs. Messrs. Veitch furnished a beautiful plant of Wellingtonia gigantea, and a spike of their new Delphinium cardinale covered with brilliant scarlet flowers. This is indeed a real acquisition. Mr. Glendinning, of the Chiswick Nursery, again showed plants of his new Larch (Abies Kæmpferi), which we hope some day to more particularly refer; Lysimachia linearifloba, a Chinese species with small white starry blossoms, the Chinese green dye plant, stated to be a species of Rhamnus; Limonia trifoliata, stated by mistake to be a hardy Orange from the north of China; and the singular hybrid called Mandirola Roezli. Mr. Parker, of Hornsey, sent Epidendrum maculatum and Galeandra Stangeana, two unimportant looking Orchids. Two sorts of Grass received from Buenos Ayres along with the Pampas Grass were furnished by E. Brande, Esq., of Turnham Green, to show that all of what is imported under that name may not be Gynerium. One was a species of Setaria, the other was stated to be some Sorghum or Panicum.

Mr. Wrench showed a few specimens of Myatt's Pine-apple Strawberry, the best flavoured of all Strawberries; but unfortunately so difficult to keep that most people have discontinued cultivating it. From the Garden of the Society came a large collection of plants, among which were Arduina bispinosa, an old-fashioned evergreen shrub, remarkable for its delightful fragrance. Veronica variegata, a charming hybrid raised by Mr. Anderson, of Edinburgh, and certainly one of the very handsomest greenhouse shrubs in cultivation; the Chinese Adamia versicolor and the Indian A. cyanea, the former pink, the latter blue, and decidedly the handsomest.

The same Garden also furnished Myrtus Ugni in fruit. The great excellence of flavour of the fruit of Eugenia Ugni (which this is now called) has already been referred to in our pages, where an illustration of the appearance of this shrub is also given, and the high character it then received it still deserves. Though not altogether hardy it was stated that it was by no means difficult to cultivate, and that Fig-houses and places of that description would doubtless be found to suit it perfectly. A collection of yellow or rather straw-coloured French Balsams also came from the Garden. They were beautifully grown and flowered, a state into which they had been brought without the aid of artificial heat. They had been raised in a cold pit and afterwards transferred to a greenhouse.

Dancer's Prolific White Gooseberry was also shown in a pot loaded with ripe fruit. This was from the orchard-house, and was produced to prove that, contrary to the opinion of many, Gooseberries will set and ripen under glass.

Among vegetables were specimens of White Paris Cos and Neapolitan Cabbage Lettuces, two first-rate kinds; Dancer's Cabbage, one of the very best sorts for market, as well as for home consumption, being very tender though of large size; and Leyden Cauliflower, with heads large and good from plants raised from seed sown in February last; excellent Cauliflowers may therefore be had at this season without the trouble of keeping the plants over winter. The Garden also contributed a collection of Beans, among which Mackie's Monarch (*alias* Sangster's Wonderful), had very long pods, plentiful on the stalk, each pod nine and ten inches in length, and containing five Beans. Another sort did not rise above a foot from the ground. This was also full of pods, and appeared well adapted for small gardens. It was called Marshall's Dwarf Prolific. Other sorts were the Mazagan common and early; Green Long Pod, valued for its colour, which it long retains; Johnson's Wonderful, a good kind of Bean; and two varieties of Windsor.

HOW TO HAVE A SUPPLY OF CAULIFLOWERS AND BROCCOLI ALL THROUGH THE YEAR.

THESE vegetables being in daily demand throughout the year in most families, a few cursory remarks as to how to supply that demand may not be unacceptable to the less experienced of your readers. The subject being a rather threadbare one, the regular "practical" will not need my observations; but as there are always youngsters coming in, if I can serve in the smallest degree even only one of these, my labour is more than rewarded. A statement of the method of my own proceeding will be the easiest way of accomplishing my purpose.

The production of a regular supply of Cauliflowers and Broccoli all the year round is an easy matter, where there is a considerable extent of ground, as is the case here; but where ground is limited, it requires some forethought and care to effect it. I generally plant out a considerable breadth of ground with the different sorts of Broccoli from the middle of June to about the middle of July, always taking advantage of showery weather; these plants are from seed sown in April. I go on planting Cauliflowers to the end of July, by which time there is ground to spare; the early crop of Peas and Potatoes will all be cleared off, and if planted with Cauliflowers they will come into use during October, November, and December; these, with the autumn Broccoli, furnish an unfailing supply until February. About the middle of December I take up all that have heads formed, and hang them in the sheds for a day or two, to let all the water out of them. I then cut off the leaves, and pack them with the heads outwards in a cool, dry, airy situation, where it is not over light; here they keep well until the middle of February, by which time, if the weather be open, some of the winter Broccoli will be fit for use. From that time until the end of May the various sorts of Broccoli will furnish an abundant supply; by that time the Cauliflowers sown in August and planted in October under glasses will be fit for use, and these will continue the

supply until those planted out in February and March are fit for use; and these again will continue the supply until those planted later still are ready, and so on until we come to October, when those planted early in July will again be ready. By always planting out plenty of plants, and always at the proper time, I never fail to be without this much esteemed vegetable.

The whole of the tribe require good, well-manured land, dug deeply. In dry weather they require copious supplies of water, and will be much benefited by liberal doses of liquid manure.

One of the market gardeners at a provincial town exhibited, in May, 1855, in the market-place, one Saturday, a waggon-load of Mammoth Broccoli, with heads averaging 14 lbs. each; he had supplied the plants liberally with the sewage manure of the town. For private families such monstrous heads would be nearly useless; but it shows what can be done. Young Cauliflower plants stand the winter exposed much better than some persons imagine. I generally plant out a good lot in October, the same time I plant under glasses, and I find them in general stand the frost pretty well; some do suffer, but many escape uninjured, and come into use nearly as soon as those under glasses; and as there is no trouble with them, and as there is generally plenty of spare ground at that time of year, even if they are all killed in an extraordinary cold winter, the loss is but trifling; whilst, if they escape, which some of them generally do most winters, they come into use at a season when most required.

BRASSICA.

HIGH GROVE, READING,

THE SEAT OF J. J. BLANDY, ESQ.

THIS neat-looking mansion is situated near the Basingstoke road, from which it is partly screened by evergreen trees and shrubs. The house stands on rising ground; at the north-east front lay the lawn and flower-garden—a square piece of ground, broken into an irregular outline by numerous trees and shrubs. On the lawn are planted numerous Conifers, several of which are fine specimens. Near the mansion is a Dutch flower garden, the beds in which are filled with choice Verbenas, Geraniums, Calceolarias, &c.; the colours of the different plants are tastefully arranged, and have a gay and striking effect from the high ground near the mansion. At the west end of the house is a quantity of beds, filled with American plants. Of Rhododendrons there is a choice collection; we noticed fine plants of ignescens, a very bright scarlet variety, Everestianum, Towardianum, Leopoldi, Lady E. Cathcart, &c. Of R. Blandyanum there are some fine plants; this beautiful variety was raised at High Grove, and is well known, ranking, as it does, amongst the best of this splendid genus. The whole of these plants are kept thoroughly well watered during their growing season, but when the growth approaches maturity water is withheld, and the beds (weather permitting) are allowed to become

dry; by this means Mr. Ingram, the gardener, considers that the plants receive a salutary check, and set their flower-buds more freely.

From the pleasure ground we are conducted by a broad turf walk to the conservatory, a large span-roof house, originally intended for Orchids, but at present devoted to greenhouse plants. Through the centre run beds for Camellias; these are divided in the middle by a fountain, which, when playing during hot weather, has a cool, refreshing appearance and a beneficial effect upon the plants, by keeping the atmosphere moist. The Camellias were in beautiful health, and were well studded with flower-buds. On the sides of the house were numerous fine plants of Fuchsias, Geraniums, &c. At the end of the conservatory is a small house devoted to Ferns and Lycopods, of which there is a choice collection, and we do not recollect ever seeing this beautiful class of plants in better health than the specimens in question. At the end of the house, opposite the entrance, stands a magnificent specimen of Cibotium Schiedei, the large fronds of which spread gracefully over a space of several feet, and on each side is a plant of Dicksonia antarctica. By the sides of the house are some fine plants of Adiantums, Gymnogrammas, Aspleniums, &c.; amongst these are arranged groups of statues, while the walls are adorned by numerous embellishments in bas-relief. The mouldings and rafters are tastefully enlivened with white and blue. At a short distance from the conservatory is a house devoted to stove plants. On entering this we are struck not more by the gay appearance of flowering things than by plants of fine foliage; Dracænas, Mussænda frondosa, Cissus discolor, Marantas, &c., give a variety scarcely to be equalled by plants in flower. Of the latter there were some fine specimens, consisting of Allamandas, Echites, Gardenias, Ixoras, &c. Of Orchids there was a nice collection, comprising Vandas, Aerides, Saccolabiums, Phalænopsis; and of other kinds there were some fine masses of newly imported Cattleyas, Lælia purpurata, &c. These were all beginning to grow freely. Mr. Ingram's system of potting this family of plants deserves notice; for most of them he uses soft peat and sphagnum in equal proportions, and in potting these are placed together so loose that when pressed by the hand they feel like a sponge. He also attaches great importance to raising the plants high above the rim of the pots.

In the forcing houses were some capital Grapes, Peaches, Figs, &c. The kitchen garden contained an excellent stock of culinary products, and exhibited, what indeed every part of the premises presented, the best of order and good gardening.

S.

NATIONAL FLORICULTURAL SOCIETY.

JULY 3.—Mr. W. P. Ayres in the chair. Dr. Maclean, of Colchester, sent some seedling Pinks, the best of which were Gem, a medium sized flower of good form and substance, the lacing good, of a light purple colour, and Miss Nightingale, a full-sized red-edged flower, of good form, and the lacing well defined. These are both first-class

flowers, to each of which a certificate of merit was awarded. The other varieties were Lizzie, Slough Buck, Eugenie, and Napoleon. Several seedling Verbenas were exhibited, none of which can be regarded as important additions to the fine varieties we now have. Mr. Todman exhibited a seedling fancy Pelargonium named Sir Colin Campbell, but it is too much like many others already in cultivation. In Mr. George Smith's stand of Verbenas, General Simpson and Glory of France were very fine. Messrs. Keynes, W. P. Ayres, Andrew Henderson, J. Baker, and T. Moore were the judges. Mr. Wyness, gardener to Her Majesty at Buckingham Palace, Mr. W. Chater, Saffron Walden, and Mr. R. E. Taylor, Camberwell, were elected members.

THE ORANGE TREE.

A FEW words on the cultivation of the Orange tree, the Citrus aurantium of Linnæus, may not, perhaps, be uninteresting. This plant, although extensively cultivated by our continental friends, is, generally speaking, all but neglected by us, although our ancestors were great admirers of it, and beautiful specimens and collections of this tree were formerly to be met with in the plant-houses of the nobility and gentry; even "Orangeries" were devoted to its growth; but now, with few exceptions, we are compelled to look for it in our modern Greenhouses, in which may here and there be found one or two solitary, half-starved specimens.

The delicious fragrance of the exquisitely formed wax-like flowers, and the handsome foliage, which, like that of the Camellia, retains its beauty throughout the year, make the Orange tree a most desirable plant for ornamental purposes, or for grouping with effect in the conservatory. The poet Cowper thus eulogises it:—

> "Who loves a garden loves a greenhouse too.
> Unconscious of a less propitious clime,
> There blooms exotic beauty, warm and snug,
> While the winds whistle and the snow descends.
> The spiry Myrtle with unwithering leaf
> Shines there and flourishes. The golden boast
> Of Portugal and western India there,
> The ruddier Orange and the paler Lime,
> Peep through their polished foliage at the storm,
> And seem to smile at what they need not fear."

In all stages of growth Orange trees are pleasing objects, the leaves even yield an agreeable aromatic perfume; and, on looking at the graceful form of a large specimen, one may readily picture what a beautiful effect masses of those trees must produce in the more sunny climes of the south. In our ungenial isle, however, we must be content to grow our favourites for the most part under glass, where they will, nevertheless, always amply repay the trouble bestowed upon them.

The cultivation of Orange trees is exceedingly simple. I find that they require rather large pots, a compost of equal portions of peat and rich loam, with the addition of a small quantity of sand and leaf-mould.

The knife must be used sparingly. Little fire heat is needed during winter; as spring advances air must be given more abundantly, and the house closed early, shutting in the solar heat; the plants will also be benefited by being syringed two or three times a week during their growth. When in full bloom they should be kept rather shaded; after the growth is completed they are best placed out of doors, in a sheltered spot, to mature the wood for next season's bloom, but in autumn they must be replaced in their old quarters.

W. G.

HOW TO DESTROY THE GOOSEBERRY CATERPILLAR.

From the many communications and inquiries which have appeared in gardening periodicals as to the best means of destroying the Gooseberry caterpillar, these pests seem to have been very numerous and destructive last year. A few remarks, therefore, pointing out a certain means how to destroy them, may not be out of place.

Nothing can exceed the health of my Gooseberry trees at present, which I attribute principally to having kept the foliage uninjured the last five years, since I adopted the means of destroying the caterpillar, which I am about briefly to detail. I tried most of the remedies I saw recommended, sometimes with more or less success, such as dusting with powdered quicklime, soot, &c., liming the ground, &c. I also tried handpicking, and I recollect once having to be absent from home about ten days. I had some women picking off the caterpillars from a lot of fine young trees, full of fruit. I charged them particularly to persevere during my absence in picking the caterpillars; but on my return home I found the caterpillars had completely stripped the trees of every leaf. Nothing could look more deplorable; fine young trees full of fruit, and denuded of their foliage. This settled my resolve, not to cease until I had found means to destroy these devouring pests. I had occasionally seen powdered white hellebore recommended as a remedy, but had never previously tried it.

My friend and neighbour, Mr. Massey, the gardener at Kirby Hall, happened to call here at the time the trees above mentioned were in the state just described; he named white hellebore as a certain means of destroying the caterpillar, and advised me to try it, which I immediately did, and with the very best results. It may be applied two ways—either by dusting the caterpillars with the powder, or putting the powder in water, well stirring it, and syringing the trees. I prefer dusting the caterpillars with the powder. Very little hellebore is required, if a sharp look-out is kept for the first appearance of the insects on the trees; and as they generally begin at the lower part of the tree, a little powder of hellebore from a small tin box with a few small holes, dusted upon the caterpillars, soon destroys them, without injuring any of the fruit. By carefully going over all the bushes as soon as the caterpillars are observed, and dusting among them, will in

general stop them for that season; at least it is not often requisite to go over the bushes twice during one season. When this simple plan is annually persevered in, little injury need be apprehended from the Gooseberry caterpillar.

I am perfectly aware there is nothing very new or original in the application of white hellebore; I am also fully persuaded many persons cannot know how efficacious it is in the destruction of the Gooseberry caterpillar; otherwise we should not hear so many inquiries as to the best means of getting rid of them. It is as cheap a remedy as any that can be adopted. White hellebore can be purchased at any druggist's for about two shillings per lb., and half a pound is sufficient to dust all the trees in any garden; indeed, a quarter of a pound will be sufficient, if the trees be done as soon as the caterpillars are first observed.

M. SAUL.

SKETCHES OF NATURE IN THE ALPS.

FRIEDRICH von Tschudi, the author of these, draws a broad panoramic view of the Alpine range—the forelands and the ridges—the lower regions full of scenic effects—forests and meadows, springs, streams, cascades, villages nursed in the lap of valleys, roads that rise upon the mountains, and lakes that lie in the hollows, with a faint, changing glow on the surface of the water. Even to these seclusions, he says, the Fon of Africa penetrates like a warm breath, colouring the clouds with purple, the outline of the moon with red, the background of the hills with violet. Here the Vine flourishes, the Chesnut, the Mulberry, with corn and vegetables—but above this line are only woods and flowery pastures. In the second zone—between the forests and the beds and masses of eternal snow—are the high vales, at intervals bright with fields, and alive with the hamlets of the peasantry, but in general dreary and monotonous.

"The Alpine flowers," Tschudi remarks, "have a remarkably deep and vivid colouring. The most brilliant blues and reds, with a rich brown shading to black, are observable amidst the white and yellow flowers of the low countries, and these tints likewise seem to assume a purer and more dazzling hue in these high regions. A similar richness of colouring is met with in the vegetation of Polar districts, where the hues not only become more fiery, but undergo a complete alteration under the influence of the constant summer light and the rays of the midnight sun, white and violet being often deepened into a glowing purple. The Alpine plants often grow in dense masses, and their extraordinary splendour of colouring lends consequently that magic charm to the fresh green turf which renders the pasture lands of the High Alps so famous. Their balsamic fragrance is no less remarkable and characteristic; from the brilliant Auricula down to the Violet-scented Moss (Byssus colithes) this strong aromatic property is widely prevalent, and far more so than in the lowlands. As further charac-

teristics of the Alpine Flora may be mentioned the absence of plants possessing narcotic or highly poisonous qualities, the marked distinction of species which exist, the comparative variety of hybrids, the bitter taste and astringent properties of many plants, and the disproportion of stem and foliage to the luxuriance of the blossoms."

The Alpine Rose, purple and yellow Gentian, the lilac Campanula, Auricula, Anemone, Violet, and the blue Columbine flourish brilliantly amid these lofty desolations.

REVIEWS.

Fruit Culture. No. 1. *The Strawberry.* By George McEwen, Gardener to W. B. Beaumont, Esq., M.P., Bretton Hall, and late Gardener to His Grace the Duke of Norfolk, Arundel Castle. London: Groombridge and Sons. Pp. 30.

IN our last number appeared an advertisement under the above heading, informing our readers that Mr. McEwen was about publishing the results of his practical experience in fruit cultivation, in which department he has achieved great results, as those of our readers who have visited our metropolitan exhibitions for the last few years can testify.

The essay before us is a valuable contribution to practical gardening, and contains instructions both for managing this really useful fruit in the forcing-house, as well as for its out-door cultivation; and although on a subject which is successfully practised by hundreds of gardeners, there is much in this little work worthy of being considered, if not imitated, by our best growers, while to the amateur it will afford an invaluable help in aiding him to force, or cultivate out of doors, this fruit in perfection. The price is only one shilling.

List of Plants cultivated and sold by Messrs. E. G. Henderson and Son, Nurserymen, Wellington Road, London. Spring, 1856.

A PERFECT volume, containing eighty-six closely printed pages, comprising lists of plants cultivated and for sale (arranged under suitable headings), nearly the whole of which are described, and many of the new plants very particularly so. The immense number of plants contained in this Catalogue renders it invaluable as a work of reference to the gardener and amateur, and it should form part of every plant-grower's library, for which reason alone we advise those of our friends who do not receive it in the way of business to procure it at once.

The Gardens of England, from Paintings and Drawings on the Spot. By E. A. BROOKE, Esq. Published by T. McLean, 26, Haymarket.

WE went the other day to see the exhibition of the original oil paintings, from which the tinted lithographs to illustrate this work have been taken. Among some of the most striking, taken as works of art, and as representing the best examples of English gardens, we may notice

No. 1, "The Trellis Window, Trentham," and Nos. 3, 11, and 20, being views of the fountain garden, terrace, and lake at the same princely residence. No. 15 is a well executed painting of the colonnade at Alton Tower; No. 8, a view in the gardens at Elvaston, is likewise cleverly done, as is No. 21, "The Alhambra Garden" at the same place. As the pictures are open for the inspection of the public, we hope patrons of gardening will avail themselves of the opportunity and judge for themselves. There are 25 paintings in the whole, and, as they are views taken from our best gardens expressly for this work, they are worthy of a visit. We hope both the publisher and artist will meet with every support in their spirited undertaking.

CALENDAR OF OPERATIONS FOR AUGUST.

Auriculas.—Encourage the growth of seedlings, as many, with judicious treatment, will flower next spring. The general stock should now be shaken out of the old soil, and repotted in pots varying in size according to the size of the plant, using good drainage. For a time, keep the plants close in pits or frames facing the north, but as soon as they have drawn root gradually increase the air, until they can be quite exposed to all weather excepting wet.

Azaleas.—Shift any of those that were in flower late. Specimens intended for flowering next season should have all the sun, light, and air possible. Young plants that it is desirable to increase in size should be kept warm and moist, with slight shading in bright weather.

Camellias.—Finish shifting these with all dispatch. They should have plenty of air night and day, and should be occasionally syringed in fine weather.

Carnations and Picotees.—It will now be too late to put in pipings; layerings should, however be proceeded with with all despatch. The bloom here is now at its height. The flowers have not been large this season, but are remarkably clean and free from blight. Again we urge the importance of getting the stock layered. If late, and a severe long winter follows, the plants will be few and weak next March.

Cinerarias.—Continue to pot in cuttings, repotting them as soon as struck. Those first struck should now receive a good shift, to ensure an early bloom. Seedlings to be similarly treated as the named plants. Mildew and green-fly must be kept under with the usual remedies.

Cold Frames.—Prepare these as they come at liberty—some of them for receiving cuttings of "bedding stuff," and others to receive the young plants when potted off.

Conservatory and Show-house.—At this season of the year, when there are plenty of flowers in the open garden, as few extra plants as possible should be kept here; a few good specimens of Clerodendrons, some Fuchsias, Liliums, Achimenes, Begonias, Balsams, &c., tastefully arranged, will make sufficient display—the permanent plants will have a better chance of ripening their wood. Air should be given freely, night and day. Water abundantly all plants in borders.

Attend to the regularity of the climbers; do not trim them too much, neither let them get entangled, but suffer them to hang freely from the rafters. Syringe freely all plants not in flower, to keep down red spider.

Cucumbers.—Sow immediately, if not done last month, for a winter crop. By getting the plants planted out whilst the sun is powerful, they make vigorous, strong growth; and by giving them plenty of air whilst the weather is fine, and by not letting them bear too soon, there will be little difficulty in getting plenty of fruit during the winter months. If the red spider makes its appearance on the plants in bearing, thin out the leaves and syringe night and morning. If the weather should set in wet and cold, make fires in houses and renew the linings to frames.

Dahlias.—Thinning out the small side shoots and disbudding will be the principal work for some time, with the exception of watering, neither of which must be neglected. It is in the former operation, however, that most care and judgment is necessary. Commence with such varieties as produce small flowers, leaving the largest kinds till last. It will be superfluous to remind the exhibitor of the importance of keeping down insects, or the necessity of tying out the principal side shoots securely.

Flower Garden.—Attend to the tying out and pegging down of the young shoots, so as to get all the beds covered as early as possible. Hoe and rake after heavy rains, to open the surface soil. Water freely plants in vases. After the middle of the month, if the weather be fine, everything will be in perfection; attend to climbing plants. Roll and mow when requisite, and keep everything in the neatest order.

Fruits (hardy).—Do not leave one single shoot more on any of the trees than is absolutely wanted. The young wood on Peaches and Nectarines should have all the light and air possible; the fruit, also, should be fully exposed to the light: this remark applies to fruit of every kind. Nail in and stop shoots of Apricots. Remove the fore-right growth of Pears and Plums. Protect Figs from wasps. Net Morello Cherries. Net or mat Gooseberries and Currants intended for late use. Cut away the Raspberry canes just done bearing, also the weak ones of the present season. Make new plantations of Strawberries.

Greenhouse (hard-wooded).—As plants complete their growth, they will require less water and more light, but they should be protected from heavy rains. The more delicate growing plants, such as Leschenaultia, should not be set out of doors. Look to the young stock in pits, and see they have plenty of air and light. (*Soft-wooded Plants.*) —Put in cuttings of those kinds required for stock.

Kitchen Garden.—Hoe and fork the ground among growing crops, and earth up as they require it. Attend to earthing up of Celery. Clear the ground of the spring and summer crops as soon as they are over, and dig and plant, or sow it with a winter or spring crop. Sow good breadths of Spinach and Turnips, to stand the winter. Plant a good breadth of Endive; also Lettuces and late Celery. Sow Onions and Lettuces about the middle of the month. Sow Cabbages of sorts;

sow Cauliflowers from the 10th to the 26th. Seasons and localities often make a great difference in these sowings, to meet which, and to be on the safe side, I generally make two sowings—one from the 10th to the 14th, and the other from the 20th to the 24th. Cut and dry herbs; take up Shallots and Garlic.

Melons.—See directions in previous Calendars.

Orchard House.—Pay the greatest attention to watering, syringing, and ventilating. Use every endeavour to keep down red spider. Stop and thin any shoots not wanted.

Pansies.—The young plants will require frequent watering, should dry weather continue. The principal danger to the stock at this season is mildew, which must be kept down with sulphur; this is easily effected, if taken in time.

Peach-forcing.—Towards the end of the month, if the weather be fine, the lights should be taken off the early house, for two, or at most three weeks; the wood will thus, by being fully exposed to the influence of the hot drying winds, get firm and ripe. When the fruit is gathered in the late houses, the trees should have a few heavy syringings. See Calendar for last month.

Pelargoniums.—Propagating will be the principal work this month. Sow seed as soon as it can be saved. The old stools, after being cut down, should not be allowed to have much rain; in fact, none, if the weather is cold with it.

Pinery.—All plants that have "shown" should be put in a house or pit by themselves. They should have a nice regular bottom heat, a moist atmosphere, and liberal supplies of water. All plants intended for fruiting next season should be shifted into their fruiting pots without delay.

Pinks.—Plant out these into store beds as soon as struck, in sandy soil. The beds should be closely examined every morning, to prevent the plants being destroyed with green grubs, which are very destructive at this season. Gather seed as often as it can be procured ripe.

Roses.—The autumnal blooming varieties will now require going over, and the branches which have bloomed should be cut back about half their length, and always to a bud growing outwards; and should the weather continue dry a good soaking with liquid manure (so soon as the buds appear) will much improve the blossoms in colour and size.

Strawberries for forcing.—These should be shifted without delay into the pots they are intended to fruit in. We prefer pots from six to nine inches, according to the kind grown. As much of the success in forcing depends on the attention paid to the plants at this season, no pains or labour should be spared to get strong, vigorous plants, with bold, well-formed crowns. Turfy loam and about one-third rotten manure make a good compost. When potted they should be set in beds four or five feet wide, and fully exposed to the sun. Pinch off all runners as they appear.

Vinery.—Towards the end of the month the lights may be removed off the early house for a few weeks. Late Grapes should have fire heat in dull cold weather, more during the day than at night; by this air can—not only with safety, but advantage to the Grapes—be given more freely than otherwise it could be.

Tea. China

Souvenir d'Elise

Plate 117.

Jas Andrews Delt & Lithe

Printed by C. Chabot

NEW TEA ROSE—

This new Tea Rose, which is the plate for this month, is a [illegible] Rose, of Paris, and was [illegible] kept in the nursery of [illegible] This addition to our list [illegible] beautiful Rose, figures, and [illegible] be lost sight of by [illegible] and section of Roses [illegible] early enough [illegible] or, for which reason [illegible] plants as the [illegible] the varieties of colour [illegible] invaluable.

Messrs. Standish & Noble [illegible] Rose from the continental nurseries, and [illegible] most [illegible] best new kinds. They [illegible] only form [illegible] with a [illegible] list of a few good [illegible] Roses [illegible] in [illegible] nursery, and [illegible] well [illegible] no Rose grows in [illegible] and [illegible] no [illegible] is lost by [illegible] moving in [illegible] number.

H.P. [illegible] of the [illegible], delicate very [illegible], [illegible] very respect [illegible] stock of [illegible] variety is [illegible] own [illegible], [illegible] purchased it from the [illegible]

M. [illegible] Leonard [illegible] a [illegible]

M. [illegible] Masson, large [illegible]

Empress Napoleon, very fine [illegible]

Général Jacqueminot, vivid [illegible]

Gloire de France, large [illegible]

Jules Pierre, large rose [illegible]

Général Négrier, rose [illegible]

Madame Carnot, rose colour, [illegible] flower

Souvenir de la Reine d'Angleterre, [illegible]

Comte de l'Exposition, bright reddish [illegible]

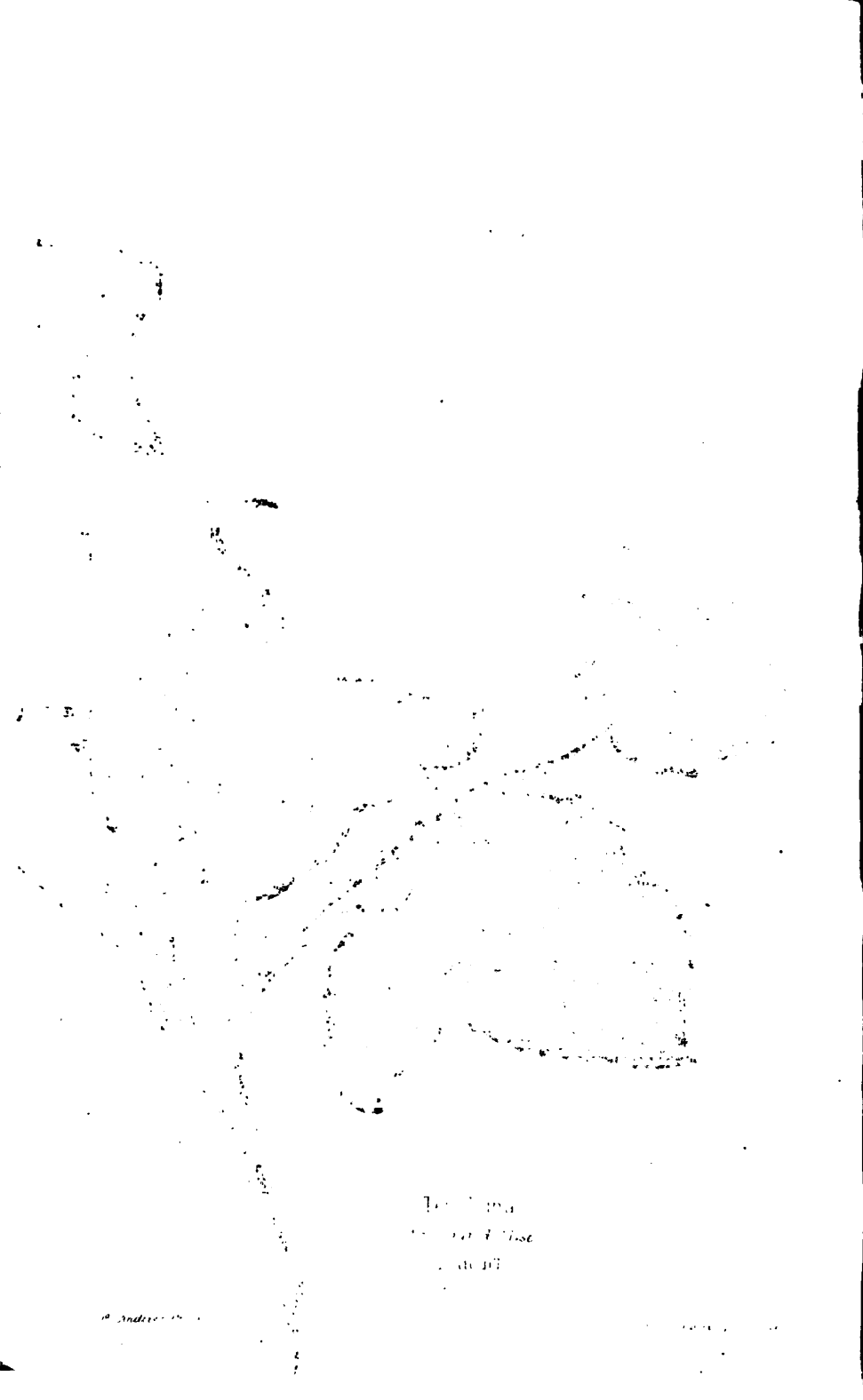
Prince Noir, very dark, petals [illegible]

Salet, beautiful rose.

Triomphe de Lyon, flesh colour, centre [illegible] ver.

Madame [illegible], fine [illegible]

Souvenir d'Assas, clear rose, very [illegible]



NEW TEA ROSE—SOUVENIR D'ELIZE.

(PLATE 117.)

THIS new Tea Rose, which is very correctly represented in our plate for this month, is a seedling raised by M. Marest, nurseryman, of Paris, and was taken by our artist, Mr. Andrews, from a plant in the nursery of Messrs. Standish & Noble, of Bagshot. This addition to our list of Tea Roses is a very desirable and beautiful one, fragrant, and quite hardy, which is an advantage not to be lost sight of by Rose growers; for the great failing in the beautiful section of Roses to which this belongs is that they are rarely hardy enough to thrive without some protection during winter, for which reason we do not find them so extensively grown as out-door plants as they otherwise would be, and for which their delicate shades of colour and delightful fragrance would render them invaluable.

Messrs. Standish & Noble pay great attention to the introduction of new Roses from the continental gardens, and import annually all the best new kinds. They have very kindly furnished us with a select list of a few good new Roses, which have been well proved in their nursery, and which will, we doubt not, be very acceptable to Rose growers in making additions to their stock. We hope to increase this list by further notices in our next number.

H.P. Victor Trouillard, flowers of the deepest crimson, foliage very fine, and in every respect a magnificent Rose. The entire stock of this variety is in our own (Messrs. Standish & Noble's) hands; we purchased it from the raiser, a gentleman at Angers.
P.M. Madame Edouard Ory, bright carmine, a fine globular flower.
H.P. Madame Masson, large full flower, clear crimson.
H.P. Emperor Napoleon, very fine, bright crimson, petals velvet-like.
H.P. General Jacqueminot, vivid red; one of the finest Roses yet raised.
H.P. Gloire de France, large and full, crimson shaded.
H.P. Madame Place, lively rose colour.
H.P. Colonel de Rougemont, clear carmine, shaded.
H.P. Madame Cambaceres, rose colour; a charming flower.
H.P. Souvenir de la Reine d'Angleterre, very large flower, lively rose colour.
H.P. Triomphe de l'Exposition, bright reddish crimson.
H.P. Lord Raglan, centre bright red, outer petals purplish.
H.P. Prince Noir, deep crimson, petals like velvet.
M.P. Salet, bright rose.
B. Gloire de Dijon, pale flesh colour, centre yellowish, large full flower.
H.P. Jules Margottin, carmine, fine full flower, very handsome.
P. Nicholas d'Assas, clear rose, very full, finely imbricated.

HORTICULTURAL SOCIETY.

I AM given to understand that several meetings have been lately held by the Council of this body, for the purpose, I believe, of coming to some decision as to the future plans on which the garden establishment shall hereafter be conducted. My own opinion on this subject has been expressed on previous occasions: it is, that a radical change is necessary in the management. I presume, of course, that nothing will be done until the result of the sale of the house in Regent-street informs the Council what sum that will place in their hands, and further, until they have ascertained what amount of the subscription to the garden fund the donors will allow to remain. Provided the house sells well, and that some considerable portion of the garden fund will be permitted to remain at the disposal of the Council, the fixed debt may at once be cleared off, when the Council, unshackled from this dead weight, will have a clear field before them—not an easy one.

The Society must be re-organised, and made more in unison with the progress of the times, before any great success can be achieved. This will be no light task, I imagine, from the fact that for several years past the Society has declined in public favour; and that it takes some time to recover a lost *prestige*, every one conversant with the management of public bodies will allow. I have hopes the Council will succeed in placing the gardens under as good management as they can procure, and that they will not act the part of many similar governing bodies—meet to talk the news of the day, and leave their immediate business in the hands of the secretary, but that they will themselves see that their plans are faithfully carried out. They are responsible to the Fellows at large, who look to them to take care that all is done which can be to maintain in an efficient state so useful and important an institution, and likewise that the money of the Fellows, subscribed for the advancement of horticulture, is not dribbled away in unmeaning experiments, or to gratify peculiar whims. The praiseworthy way in which your periodical brought the affairs of the Society before the public a few months ago, induces me to trouble you to insert this, which not only expresses my own opinion, but, I know, that of many other F.H.S.'s as well.

F. H. S.

[We readily give insertion to the foregoing very sensible letter, and think we may assure the writer that at the present time the Council are engaged on the very plans our correspondent points out. How far they will succeed must depend on the co-operation of the horticultural world, who, we hope, will join in helping the Council to carry out those practical measures for remodelling the Society which we believe they have in hand. This can only be done by becoming subscribers themselves, and inducing their friends to do so also. Two guineas a year is the new scale of subscription; no great sum, certainly, but one which, if responded to by lovers of gardening, in the way we hope it will, will enable the Council to place the Society on a firm footing of usefulness, and again render it one of the most really important public bodies in the kingdom.—ED. FLORIST.]

LONGLEAT, WILTS,
THE RESIDENCE OF THE MARQUIS OF BATH.

THIS place has long been celebrated for its magnificent mansion of palatial dimensions, which, as Loudon observes, is the proudest architectural monument in the west of England—and its noble park and domain. The house occupies the site of an old religious establishment, and was built by John of Padua in the 16th century, in the transition style of the day, placed in the bottom of a valley. The park stretches away from it in every direction, diversified by hills richly clothed with fine timber; it contains within its boundary a delightful variety of park-like and sylvan scenery. The view from the range of hills which run across the park, on the Warminster side, has few equals in the west. Immediately below the spectator lies the beautiful valley, encircled with rising grounds, covered with wood, in which the house, gardens, and lake are situate, looking over which the eye takes in a wide expanse of rich landscape, terminating with the Somersetshire hills in the extreme distance. To the left the eye catches "Alfred's Tower," a conspicuous object for miles around, rising from the wooded range of Stourhead, the great feature of that part of Wiltshire and Somerset. At a distance of some twenty miles to the right "Beckford's Tower," on Lansdowne, near Bath, is visible; and much nearer the spectator lies the picturesque market town of Frome, on the skirts of the park, and apparently a part of the domain, which in a great measure it is.

The noble proprietors of Longleat for a long series of years have been great promoters of planting and gardening. Switzer describes Longleat as being, towards the end of the 17th century, laid out on a grand scale; and from a plan of the place we have seen of this period, it appears to have been surrounded with gardens, in the regular Dutch style prevalent at that time, with long avenues, vegetable sculptures, and embroidery parterres, occupying a large extent of ground. The park likewise appears to have been regularly laid out with avenues, &c., in a similar formal manner. When these were replaced, by substituting the present disposition of the grounds, and planting, we are not informed, but suppose it to be the work of Brown, who, nearly a hundred years ago, formed the lakes running through the park, and introduced a deal of planting. That the lakes were formed by Brown there is no doubt; in fact, they are the worst feature in the park; their tame outline and bald shores assure us Brown was their designer, as well as of some of the clumps of trees. Brown, though more extensively employed as a landscape gardener than any person of the last century, had no genius for his work, and were it not that many of the gardens he laid out have been altered from his designs, the tame formal outlines of his water, and ever-recurring clumps of trees, would have transformed the natural features of many of the places he altered to a mere formalism, infinitely less artistic than the Dutch or French style he was so anxious to obliterate.

Nearly the first Weymouth Pines introduced to England, and called after Lord Weymouth (afterwards Lord Bath) were planted here in

1705. One or two of the original trees are yet standing, and are of large size. There are, besides, some grand Silver Firs and Cedars; of the former Mitchell relates that there was formerly a grove of sixteen trees, 22 feet apart, 110 feet high, and from 10 to 13 feet in circumference. One of the trees felled produced 299 feet of timber. Loudon describes a Silver Fir here as being (in 1835) 138 feet high; the diameter of the trunk 5 feet 8 inches. There is a tree yet standing considerably (we should say) above 100 feet high and 15 feet in circumference. In the grounds is a good plant of Cunninghamia sinensis 30 feet high; likewise fine specimens of Taxodium distichum (deciduous Cypress), the branches of which are cut and grouped with flowers for filling large vases, where its Fern-like leaves have a pretty effect.

The flower-gardens and grounds under the scythe occupy a large space between the mansion and one of the lakes; there is, besides, a regular geometrical flower garden in the rear of the house, and fronting one of the old-fashioned conservatories of the last century. Many of the beds on the lawn are partly filled with dwarf flowering shrubs and herbaceous plants, and thus become gay and interesting at a much earlier period than when only the ordinary bedding plants are employed. We are very partial to this mixed system, particularly when the beds are large and no exact arrangement, rendering it indispensable for them to match, occurs. In the geometrical garden, on the contrary, the utmost regularity is preserved, and the beds were filled with a good variety of showy plants; among others we were much struck with some circular beds of Zelinda and scarlet Ranunculus; Dahlias, pegged down close, the flower-stalks elevated the blooms one foot from the ground, and being one mass of bloom, they produced a very brilliant effect. We likewise observed some fine beds made by mixing Mangles' variegated Geraniums and Heliotropium Voltaireanum; the beautiful play of colour produced by mixing these two plants was very striking.

The kitchen garden is planted a mile away from the house, at the southern verge of the park; it contains ten acres, and encloses the two sides of a valley which runs through from east to west. This is found to be an advantage rather than otherwise, as the slope facing the north is found very useful for vegetable crops and Strawberries during the summer. The subsoil of the garden is strong clay, and although the crops are found to be later by a fortnight than when grown on lighter soils, the produce and quality are excellent, for we observed the vegetable crops generally and Strawberries were growing vigorously, and looking quite green and healthy, notwithstanding the extreme hot weather of the last month. The subsoil is rather too cold for Peach trees out of doors, which suffer much in the spring. But Apricots, Pears, Plums, and Cherries thrive well, and even this present season are producing very fair crops of fruit—in fact, the best crops of Pears and Plums we have seen. On the north bank of the garden is a range of forcing houses 350 feet long, in eight divisions, four of which are devoted to Pines, having Vines as well on the rafters. Mr. Anderson, who for many years has been head gardener here, very wisely grows only two sorts of

Pines—the Queen and Jamaica. The whole stock was in fine health—indeed Longleat has long been noted for its excellent Pine-apples, many of great weight having been exhibited from this place. In addition to the usual selection of Grapes, the White Frontignan is a favourite here, Mr. Anderson growing it largely for white Grapes. Although usually considered delicate, it grows and fruits here remarkably well. In one house, set apart for Vines alone, the different varieties of the Hamburgh Grape were originally planted, with a view to test their merits. The whole, however, with the exception of the common Hamburgh, have been cut away, as Mr. Anderson is of opinion that though larger and more showy, they were more or less deficient in the many good qualities for which the old Black Hamburgh is so justly esteemed. This was therefore selected to fill the house, and was trained horizontally along the bottom, and a rod taken up each rafter. This is now a vigorous young Vine, and has this year upwards of 200 bunches of fine fruit on it. At each end of the range is a Peach-house, in a good healthy state; the sashes are removed each year, in August, as soon as the wood begins to change colour.

In an old pit 40 feet long, and heated by a common flue, is obtained a constant supply of Cucumbers. A large wooden trough stands on the flue in which the Cucumbers are planted four lights at a time for succession. The Sion House Improved and Lord Kenyon's are the favourite kinds. The winter crop had just been planted; this house presented to us a very economical mode of obtaining a crop of this useful fruit, the flue requiring merely a few cinders or small coal to keep it going.

An experiment has been tried here by Mr. Anderson of considerable interest to gardeners, by way of proving what effect the different kinds of glass now recommended for plant and fruit houses had on the plants grown below them. Five years ago a four-light frame was devoted to the purpose, having one light glazed with Hartley's rough plate, one with Hartley's corrugated, one British sheet, and one with Crown glass. During the five years a variety of plants have been grown in this frame, including Strawberries; and Mr. Anderson informs us no perceptible difference could ever be detected, either in the growth of the plants, the colour of the flowers, or flavour of the Strawberries. We may therefore infer that as regards cultivation, no great amount of difference exists between the descriptions of glass mentioned; while, to suit particular purposes, one sort may be substituted for another, without causing any detriment to the vegetation they cover.

About 2000 pots of Strawberries, principally Queens and Trollope's Victoria, are forced annually here. In the Vineries we noticed large quantities of Achimenes, Gesneras, and some very good Orchids, which, with a variety of other plants, are used for house decoration. There is likewise a nice collection of Heaths and other greenhouse plants grown for similar uses. J. S.

BRITISH POMOLOGICAL SOCIETY.

August 4.—The annual meeting of this Society was held this day, Richard Underhill, Esq., in the chair. The Secretary produced a report of the progress of the Society, its present position, and its prospects for the ensuing year, showing that it was steadily, surely, and firmly establishing itself, and increasing in usefulness.

During the past year 44 new members had been elected, and the number of members brought forward from last year being 87, from which four had been removed by death and other causes, the members on the roll on the 1st of August this year was 127.

From the accounts of the past year, furnished by the Treasurer, it appeared that

	£	s.	d.	£	s.	d.
The total receipts had been	79	0	0			
Added to a balance brought forward from 1854-55	21	3	10			
				100	3	10

And that the expenditure had been

For Rent	16	0	0			
Advertising	13	0	6			
Printing, Stationery, Postage, &c.	17	13	11			
Fixtures and Furniture	3	18	0			
Carriage of Parcels and Expenses connected with Meetings	4	14	5			
Assistant Secretary's Salary	20	0	0			
				75	6	10
Showing as a balance to be carried forward of Cash in hand				£24	17	0

The following abstract was laid before the meeting, comparing the receipts, expenditure, and prospects of the Society at the close of the financial year ending 31st July, 1856, with those of the year ending 31st July, 1855.

	July 31, 1855. £	s.	d.	July 31, 1856. £	s.	d.
Received by Donations	16	10	0			
„ Entrance Fees	34	0	0	18	0	0
„ Subscriptions	33	10	0	49	0	0
„ Arrears				12	0	0
Total Receipts	£84	0	0	£79	0	0
Expenditure	62	16	2	75	6	10
Balance carried forward	21	3	10	24	17	0
Cash uncollected	17	0	0	26	0	0
Revenue from Members in current year	43	10	0	63	10	0
Comparative prospect July, 1855, and July, 1856	£81	13	10	£114	7	0

This estimated income for the ensuing year being exclusive of what may arise from the entrance fees and subscriptions of any new members who may be enrolled.

It was explained that the expenditure this year, though apparently greater, was proportionately much less than in the previous one, as it

included the assistant secretary's salary; and that although the cash uncollected appeared greater in amount, it was only in proportion to the increased number of members.

The accounts having been examined, it was moved by Mr. Rivers, seconded by Mr. Adams, and carried unanimously, that the same be approved.

The Secretary reported that although the Transactions had not yet been published once a quarter, in accordance with the original intention, he considered the present and prospective state of the Society's finances, and the promise of important and useful communications from members, would enable the executive to ensure greater regularity in future.

It was ordered that the Assistant Secretary should represent the importance of the subscriptions being punctually paid, in order that the Society's exertions and progress should not be crippled by the possibility of their expenses exceeding the funds at their disposal, and especially that the early payment of all arrears now due be respectfully solicited.

It was also ordered that as soon as possible after each meeting a report thereof be printed and sent to each of the members and to such newspapers as it might be desirable to have the Society's proceedings noticed in.

The Secretary then brought up a report of a committee which had been appointed to meet on the 17th July, to consider certain alterations which appeared necessary in the rules regarding the days of meeting and other matters.

The alterations recommended were discussed seriatim and approved, and it was proposed by Mr. Adams, seconded by Mr. Taylor, and carried unanimously, that the amended code be adopted.*

The meeting then proceeded to the election of office-bearers for the ensuing year.

Mr. Hogg regretted that he could not give the attention he desired to the duties connected with the office of Secretary, and expressed his wish to resign, but promised to give all the aid in his power as a member. It was then agreed that Mr. Hogg be elected a Vice-President of the institution in lieu of W. Stephens, Esq., deceased. Mr. J. E. Lane was elected a Member of Council in lieu of Mr. Hogg, and J. Silver, Esq., in lieu of Mr. F. G. Malleson, resigned.

It was moved by Mr. Hogg, and seconded by Mr. Rivers, and carried unanimously, That a Publishing Committee be appointed to watch over the Publications of the Society, and assist in collecting useful information for the Transactions, and Messrs. Hogg, Rivers, Taylor, G. Paul, and J. B. Whiting were appointed to form such committee.

FRUIT SENT TO THE MEETING.—Mr. Carpenter, of Barr Hall, near Birmingham, furnished another bunch of his Seedling White Grape, with a reply to inquiries which had been sent to him concerning its origin, hardiness, and productiveness. It was reported to be raised

* A copy of the Amended Rules, with the corrected List of Members and the office bearers for the years 1856-7, was forwarded to each member along with the Report.

in 1852 from Black Hamburgh crossed by the Royal Muscadine, and first fruited in 1854; to set as freely and ripen with the same heat and in the same time as the Black Hamburgh, partaking of the Hamburgh in the character of bunch, and of the Muscadine in foliage. It is also said to be a good cropper, and the fruit having been ripe in the end of May on the plant from whence the specimens were taken, it appears to be valuable for its keeping properties. The council considered it a new and very distinct variety, the berry oblate, skin thick and astringent, white, and reticulated with russet; flesh hard and of good flavour, but not equal to many varieties of white Grapes already in cultivation; the seeds are large, and adhere to the footstalks and to the flesh in separating from the berry.

Mr. Rivers brought a bunch of an early and nearly hardy black French Grape, the Muscat de Sarbelle, very black in colour, of the Frontignan flavour and habit. Also a dish of his Plum, Early Prolific, No. 2. This is well known as a useful and very productive variety. Mr. Rivers mentioned that it is loaded with fruit this year, but is the only one producing a crop out of about three hundred varieties in his nursery.

Mr. Underhill brought specimens of his Sir Harry Strawberry in fine condition, so that its qualities can be fully tested; the berries were large, firm, and well coloured, and the flavour betokens a strong flavour of Hautbois. It was unanimously pronounced a first-rate fruit. A two-year-old plant was produced with its fifth crop of fruit, ripe and ripening; it had been forced last year, fruited again early in autumn, and afterwards prepared for early forcing; it produced its first crop this year in January, and being planted out in the usual way bore its second crop in June, and again as exhibited. These matters were mentioned to draw attention to the prolific tendency it displayed, and to suggest the desirability of endeavouring to originate and perpetuate a race of Strawberries having this desirable property in a greater degree than those we at present possess.

Mr. Kitley, of Lyncombe Vale, Bath, sent a dish of his variety, Carolina superba, which was so highly approved at the previous meeting.

Messrs. Stewart and Neilson, of Liscard, Cheshire, sent another sample, according to request, of their Late Seedling Strawberry. It was not, however, found equal to the requirements of the Society, its flesh not appearing firm enough to endure the heat of the sun.

Note.—In forwarding this Report to the members of the British Pomological Society, they were respectfully solicited to bear in mind how much might be done by individuals in extending its power and usefulness, if they would take such opportunities as occur of making known its existence and objects to those friends and others whom they might meet with, and who, from their tastes and pursuits, were likely to be interested in the matters which come under its cognizance. Copies of the Rules can be obtained on application to Mr. Davidson, at the Rooms of the Society, 20, Bedford Street, Covent Garden.

ON HYBRIDISING FRUITS.

It is a subject of common remark with all my neighbours who have gardens, that so little has been done in the way of producing improved races of fruits, that I venture to bring it before your readers. Though not directly connected with practical horticulture, I have for years taken great interest in all pertaining to it, particularly fruit culture. If I am correct, we are indebted for our best Peaches, Nectarines, Apricots, Plums, and Cherries, to generations long passed away; for by consulting the old fruit catalogues, I see most of the best kinds of the above were known a century and a half ago, some even earlier than that. Now, as we may suppose that these were raised from inferior varieties existing before, how comes it to pass that no improved kinds have been raised from them within this period?—or, are we to understand that the Royal George, Bellegarde, and Noblesse Peaches (and likewise other fruits long cultivated), have reached their climax of perfection, and are incapable of further improvement? But then why is it that some Pears, and one or two other things, such as Strawberries and small fruits, contemporary with the above a century ago, are now discarded as being comparatively worthless, and in the place of the old kinds of Pears, we have the delicious fruit, now found in almost every garden, from France and Belgium? I conclude from this that the fruits I have named have not been experimented on in the same manner as the Pear and Strawberry, at least in this country, for I am ignorant what has been done with them on the Continent. I beg to ask, therefore, if you or any of your readers can afford me any explanation why so important a part of gardening as raising new fruits should be so neglected.

Somersetshire, August. A Country Rector.

POT CULTURE OF STRAWBERRIES.

The forcing of Strawberry plants is so common, that there are few gardens of any pretension in which a greater or less quantity is not potted for the purpose. The various operations of layering, potting, storing for winter, &c., have been so frequently detailed, that there is little that is new to be advanced. As, however, there are differences of opinion on certain points of their culture, so must there necessarily be a difference in their relative merits; and such being the case, I think there is generally an amount of truth elicited by candidly stating what is considered a good practice. Now although the layering Strawberry runners is a very simple operation, yet it is one on which opinions widely differ.

Some gardeners consider there is an advantage in planting the runners in the fruiting-pots in the first instance; and I am aware that first-rate plants are obtained by this practice, and the plants have been in every respect equal to those layered in any other way. In my opinion, the only objection to this system is, the unnecessary trouble of carrying large pots to the ground where the runners are to be obtained.

The most common practice is to fill a quantity of small pots with soil, on which the runners are laid, secured by placing a stone close to the plant. Now, although good plants are obtainable by this practice, it is open to many objections, one of which is the large amount of attention requisite to keep the soil in such small pots sufficiently moist to prevent the plants from suffering, for although the runners will be kept alive by the parent plant, little progress will be made unless attention is paid to supply the roots regularly with water. Another, and perhaps a more serious objection to small pots, is that of having the roots coiled and cramped up in so small a compass. I may perhaps be told that the plants should not remain in the small pots till such has taken place, or that it is an easy matter to liberate them at the time they are re-potted. Strong runners—such as should be selected for potting—will in a very short time fill a small pot full of roots, and it is not at all times convenient to attend to the re-potting just at the time they require it. As regards the liberating of the roots, it cannot be done without giving a severe check to the young plants, nor are the roots, after that operation, in a good state to ramify into the fresh soil in which they are potted.

The planting of the runners in the ground in which the old plants are growing, though practised by some, is not so generally adopted as its merits deserve, as I consider there are many advantages in this system. The practice is to make a hole so large that it will contain about as much fresh soil as a 48-sized pot; it is then filled up with the approved compost—loam and leaf-mould, through which a liberal sprinkling of soot has been mixed, to keep the roots free from worms. In this the runners are pressed down and well watered. In a short time the fresh soil will become full of young fibres, and the plants will grow vigorously; water will occasionally be required during hot weather. In about three weeks the plants are taken up and potted into the pots in which it is intended to fruit them, taking care that each plant is well watered before lifting. If this is attended to, the plants will lift with the whole of the soil placed for them, and their roots will be in a better state to take to the soil in which they are potted than after being cramped up in small pots.

F. S.

NATIONAL FLORICULTURAL SOCIETY.

JULY 7.—Mr. Thomas Moore in the chair. Messrs. Downie & Laird, of Edinburgh, sent a collection of fine Sweet-williams, remarkable for rich colours, and some of them having distinct white centres. These were of fine shape, and if they had possessed a smooth edge would have been perfect in form. The whole of them were serrated on the edge, notwithstanding which they were beautiful and attractive varieties. Mr. W. Chater, of Saffron Walden, sent some spikes of seedling Hollyhocks. The best of them were Beauty of Walden, shaded rosy pink, high full centre and good guard, to which a first-class certificate was awarded; Sir William Middleton, light rosy salmon; and Buff,

No. 1, pale creamy buff—both of which were awarded certificates of merit. A label of commendation was awarded to Summit of Perfection, pale rosy carmine, large, but loose in the spike, and somewhat rough, still a useful variety, and of a novel shade of colour. The same grower also contributed some cut blooms of seedlings, the finest of which was Queen of Buffs, a superb variety of a pale salmony buff colour, large, and very high centre. This is a first-rate variety, and received a first-class certificate. The best of the others were Sceptre d'Or, a large salmon variety; Ochroleuca, pale yellow, and large, forming a close spike; Canary, pale yellow; Satellite, light salmon, and Lady Middleton, light blush, somewhat resembling Joan of Arc in colour, and forms a close spike. Mr. Cole, of St. Albans, sent some seedling shrubby Calceolarias, the most striking being Ackbar, of a brownish crimson colour edged with orange, and very dwarf shrubby habit; a label of commendation was awarded to it for its utility as a bedding variety. For 6 Carnations, first prize to Mr. C. Turner, for King John, Seedling, Victoria Regina, Hope, Lord Goderich, and Great Northern; 2nd prize to Mr. Bragg. Picotees: 1st prize to Mr. C. Turner, with Mrs. Dodwell, Bessie, Queen Victoria, Mrs. Lochner, Dr. Pitman, and Lamia. Yellow Picotees: 1st prize, Mr. C. Turner, with Cuirassier, Champion, and Aurora. Hollyhocks, 12 blooms: 1st prize, Mr. C. Turner. Hollyhocks, 3 spikes: 1st prize, Mr. W. Chater. Verbenas, 12 blooms: 1st prize, Mr. George Smith; 2nd prize, Mr. Weatherill. In these stands the best were General Simpson, a very fine variety; Géant des Batailles; a seedling named Venus, pure white, with small crimson eye and good shape; Gloire de France, and a light seedling named Hunt's Defiance. Mr. Salter sent a small-flowered Antirrhinum striped like Youngi, named Lollipop, and a bedding Geranium, Rose Unique, not bloomed freely enough to see if it was useful.

RIBSTON, YORKSHIRE,

THE SEAT OF JOS. DENT, ESQ.

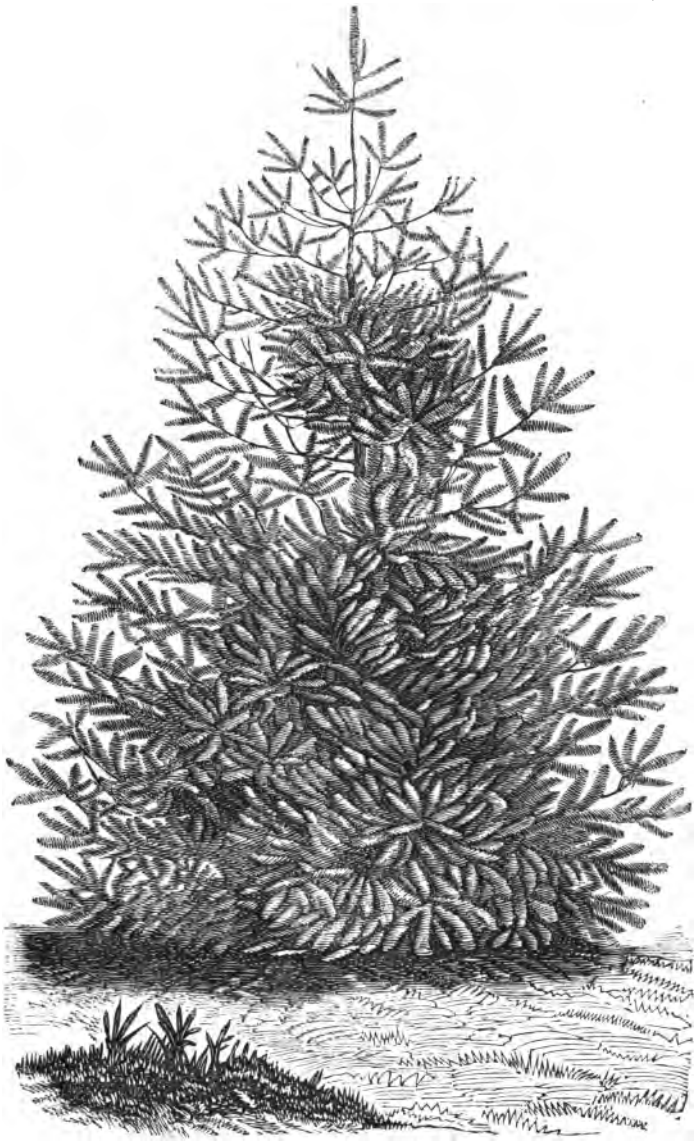
THERE are very few gardeners to whom the name of Ribston is not familiar—the far-famed Apple of that name having originated here. The place is about fifteen miles west of York, and about six miles south-east of Harrogate. Many hundreds of visitors to the last-mentioned place avail themselves of Mr. Dent's liberality during the season, Ribston being shown on every Tuesday. The mansion is situated near the river Nidd. At the east end of it there is an ancient chapel; and within a very few yards of it (the chapel) there is a very old Mulberry tree. The terrace garden is at the south front of the mansion, and about 200 yards beyond flows the winding Nidd. The "bedding" in the terrace garden is remarkably well done; every bed is perfect—no gaps or bare places, nor is there any loose rambling growths; there is not a poor bed in the whole garden, consequently the effect is very good. At a short distance from this garden there is a

sort of irregular flower-garden, which is a most excellent connecting link between the terrace-garden and the pleasure-grounds. There are a great many of the best kinds of Roses in this garden, which have been very grand this season. There are also some very good raised flower-beds here. Among them there is an oval raised two feet above the Grass; it is made of Larch poles driven into the ground; these are all covered with Ivy. The white Ivy-leaved Geranium is used for the outside border (and which hangs nearly to the Grass); next this a dark-coloured Calceolaria for the second border, then yellow Calceolaria, then scarlet Geraniums, then Ageratum mexicanum, and for the centre scarlet Salvias, the whole forming a very effective and pleasing bed. There are several mixed masses in this garden, which are very good.

The pleasure-grounds, which are extensive, varied, and very beautiful, contain many fine specimens of trees and shrubs; the evergreens are particularly fine. There are a great many handsome promising young Conifers about the grounds, and among them some very fine young trees of Cedrus Deodara, also two very handsome young specimens of Abies Pinsapo, one about eight and the other about twelve feet high; both are perfect gems, of the general appearance of which some idea may be gathered from the accompanying representation of one of them. We also noticed a nice healthy plant of Taxodium sempervirens, which has stood out several years unprotected. It is, however, growing in a dry sheltered spot. Cryptomeria japonica has also stood the winters well unprotected. There is also a fine tree of Pinus excelsa; there are a number of other very flourishing young plants of Conifers in the grounds.

Approaching the kitchen garden from the pleasure-grounds, there is a conservatory and two plant-houses, in which there was a good display of flowers. Passing from these we entered the kitchen garden, which is extensive and good. Notwithstanding the season, the fruit crops are an average. Peaches, Apricots, Pears, and Plums on the walls are all nearly an average crop; they have not had any protection whatever. Many of the Apple trees in the open garden, both dwarfs and standards, have a fair crop of fruit, not loaded. We were rather struck with the quantity of Apples in these gardens, as in going to Ribston we passed some orchards that had scarcely a fruit. The cause of the difference we attribute to the trees in Ribston garden being annually attended to in pruning, &c., and the orchard trees being neglected.

There are two good ranges of glass houses in the gardens, besides pits, &c. Ribston has long been celebrated for its hothouse productions. Mr. Abbott, the head gardener, is a most successful grower of Pines, Grapes, Figs, Peaches, &c. Everything is at present in the greatest possible perfection; the Pines are exceedingly good: Queens from five to six pounds is an ordinary occurrence at Ribston. We venture to assert that few, if any, places surpass Ribston for Grapes. We have seen Muscats in many parts of the country, and at many of the metropolitan exhibitions, but have never seen any as good; we repeat, as good as those we have seen at Ribston; and at the present time they have some bunches that will weigh four pounds or upwards. The Black Hamburgh Grapes also are first rate; many of the bunches will



ABIES PINSAPO.

weigh from two to three pounds each. In fact, everything, both in-doors and out-doors, is in the best possible state, and reflects the highest credit on Mr. Abbott. Every part of the place is also in the neatest order and good keeping.

Before closing this brief and imperfect notice of this beautiful place, we may remark that the spot where once flourished the 'original' Ribston Pippin, is about 200 yards distant from the principal entrance to the gardens. Mr. Dent has enclosed it (the spot) with a substantial wire fence. A young tree, said to be a sucker from the original, is growing where the parent tree stood; it grows pretty freely, but the stem is not a clean, healthy one, and some of the last season's wood is dead, so that it is not likely to attain either a large size or great age.

BETA.

FERNS AND MOSSES.

IT has often been a source of wonder to me that man, with all his imitative powers—more especially the gardening class—has not made Ferns and Mosses more subservient to the many decorative purposes to which they are so appropriate, and to which a bountiful Creator has set so liberal an example in the decoration of the universe—from pole to pole, from the torrid to the frigid zones, on the mountain's top and the cavern's shade, and from the tropics' heat to Iceland's cold, are to be found those unassuming yet most beautiful of Nature's adornments. Yes, most beautiful! For instance, take a small portion of one of these plants, and examine its every part. See the chasteness of its general outline; see the accuracy of its divisions and incisions; see the wonderful organisation of its fructiferous organs; see the wonderful and distinct formation of the same in their every genera. In one you will find its fronds studded with small circular golden forms; in another you will see a brown marginal band, encircling its every incision; and upon another, the reproductive organs are produced in broad parallel stripes; then, again, kidney-shaped, &c. Then examine its every species, and see the extraordinary and distinct shape and make of each, together with their elegant and very graceful appearance, and then say if the class Cryptogamia is not one of the most interesting and beautiful of all inanimate creation.

Then why not bring this class more generally into use? Is it because they will not thrive in our shrubberies?—or won't they do on the margins of our ponds and lakes?—or won't they grow and cover with a face of green our old unsightly walls and buildings, and stumps of old trees?—or, is it even our cottage itself that Ferns and Mosses will not do upon? I answer in the affirmative; for many of our most handsome and hardy species luxuriate in such localities. Then, again, for the nooks and corners of our stoves and forcing-houses, &c., where can we find anything more at home than Ferns, whether in pots, or springing out from the holes and crevices that otherwise would be un-

sightly? Then why not more freely introduce them? I am very glad to see that the cultivation of this charming class of plants is become so popular—aud justly so—for I am sure that no admirer of nature can pass one of those most unobtrusive of all her works without feeling a thrill of delight, and which must lead—as has elsewhere been justly said—

"Through Nature up to Nature's God!"

It is not my province or intention, here, to write a treatise upon the cultivation of those plants, which has so often and ably been done by far wiser heads than mine; but I merely throw out these hints, to endeavour to show what a very wide field there is open for the more natural cultivation of them; sufficient, I trust, to induce many of your readers to find some nook or corner where they can try "effect;" and if once a trial be made, I will vouch there will be no stopping short, for be it understood there is no such word as finality admitted into the gardening vocabulary.

Ribston Park, Wetherby, York. THOS. W. ABBOTT.

NOTES ON THE NEW PANSIES OF 1856.

Jeannie (Downie & Laird).—A very smooth dark puce self, of fine substance. Bottom petal rather small.

Indian Chief (Dickson & Co.)—Rich purple self; form and substance extra; size small.

Glory (Hampton).—Pure white self, very smooth and flat; fine eye, substance rather thin, form good, full size.

Defiance (Hampton).—Yellow self, of no value whatever as a show flower.

Mrs. Dodwell (Fisher).—The best yellow self out; imperfect in form; still, all points considered, the best in its class.

Gem (Syme & Middlemas).—A very smooth beautiful dark self; in its composition perfect, but with me under-sized.

Red Rover (Schofield).—A very distinct yellow-ground variety, beautiful in every point, rather under-sized.

Cyrus (Dickson).—Rich chrome yellow ground, bronze crimson belting; large, smooth, and of fine form.

Rubens (Dickson & Co.)—Rich yellow ground, clear bronze belting. A fine sort, but a bad doer.

Charles Napier (Dickson & Co.)—Yellow ground, rich puce belting, very fine and very small.

Splendid (Schofield).—A worthless yellow-ground variety.

Earl of Cardigan (Holland).—A good pale yellow-ground flower, much in the style of Pandora (Hunt), on which it is a slight improvement.

Empress Eugenie (Stuart).—A white-ground flower, of no value whatever.

Princess (Dickson & Son).—White and clear blue purple; large, smooth, and of fine form. Deficient in substance.

Miss Nightingale (Dickson & Co.)—White ground flower, extra fine in every respect.

Mrs. Hampton (Hampton).—A very constant good white ground flower, similar to Argo (Paton & Small), but larger and of better substance.

Countess (Addis).—A singular and beautiful white-ground variety. Colour of margin pale soft blue; very distinct, and a useful show flower.

Schamyl Bey (Douglass).—Rich smooth dark self, but too small for exhibition.

Mrs. Dundas (Downie & Laird).—Straw ground, deep puce belting, very smooth, and of fine substance; form defective.

BEST TWENTY-FOUR VARIETIES OUT.

YELLOW GROUND.
Alpheus (Dickson & Co.)
Cyrus (Dickson & Co.)
Rev. H. Gossett (Turner)
Emperor (Hall)
Catherine Dundas (Downie & Laird)
Lord John Russell (Turner)

WHITE GROUND.
Beauty (Downie & Laird)
Miss Nightingale (Dickson & Co.)
Mrs. Hampton (Hampton)
Miss Walker (Syme & Middlemas)
Princess (Dickson & Co.)
Lord Raglan (Campbell)

DARK SELF.
J. B. Gough (Downie & Laird)
Jeannie (Downie & Laird)
Gem (Syme & Middlemas)
Indian Chief (Dickson & Co.)
Duke of Sutherland (Tunley)
Royal Albert (Turner)

YELLOW SELF.
Mrs. Dodwell (Fisher)
Yellow Climax (Paton & Small)
Golden Eagle (Dickson & Co.)

WHITE SELF.
Alice (Hampton)
Mrs. H.B. Douglass(Downie & Laird)
Countess of Strathmore (Hamden)

Birmingham. R. R. OSWALD.

CULTURE OF FUCHSIA SERRATIFOLIA.

WHEN well managed this is a valuable and truly useful plant for the autumn decoration of our greenhouses and conservatories. For these last three years it has been a favourite with me, and I have found it to realise my highest expectations. I strike my cuttings early in March, placing them in a gentle hotbed; in three weeks they get well rooted, I then repot them into 60-sized pots, in a compost of equal parts of well decomposed cowdung, leaf-mould, and loam, with a sprinkling of road-sand. I again place them in a little bottom-heat, to establish them in their pots, taking care to exclude the hot rays of the sun; after which I remove them to a cold frame, shifting them as they may require, but especial care must be taken not to let them get pot-bound. This is a point in the cultivation of this plant which requires particular attention, for if neglected, the leaves either curl or turn yellow and fall off. This practice I follow till the middle of September, when I give them their final shift, leaving out this time the portion of cowdung, which up to this time is employed; this I find tends to throw them into a flowering state, and to stop that vigorous

growth which it is essential to do at this stage. The most important point, however, to attend to in cultivating this Fuchsia is to keep on it clean and robust foliage, which to get in perfection will require much care. To attain this I have used weak manure water two or three times a week, taking advantage to syringe the plants with the same after a hot day, which I find improves both the health and growth. After that I leave them fully exposed to the night air and morning dews, and these, I have learnt from experience, they enjoy; but after you have gone thus far a few hours of midday sun will deprive you of that luxuriance of foliage you have so long been trying to maintain. To guard against this, the plants must be shaded at least six hours a day, if the sun is hot in August; as the season advances, however, the length of time the shading must be on must be reduced. By following this practice I have found them do admirably, and amply rewarded me for my trouble. I have now plants standing in 24 size pots, with which, for health and vigour of foliage, few could compete, with beautiful spikes of flowers, which will be visible about the middle of October, when I shall have but little else to decorate my conservatory with, and will prove a source of gratification to all who see them.

HOLLAND.

NATIONAL CARNATION AND PICOTEE SOCIETY.

AUGUST 5.—The Sixth Annual Exhibition of this Society was held in connection with the Handsworth Horticultural Society, at the Leverets, near Birmingham. The exhibition was a very good one indeed. The southern growers just managed to keep their flowers to the day, and the extreme heat which has been experienced for some time brought the northern flowers well into bloom. Derby, York, and Nottingham were well represented, making one of the best "Nationals" we remember to have seen. We subjoin the awards:—

Class A.—Nurserymen. 12 Carnations. 1st, Mr. Charles Turner, Royal Nursery, Slough, with Victoria Regina, Prince Albert, King John, Seedling S. B., Ascendant, Admiral Curzon, Seedling S. F. (fine), Kirke White, Hope, Poor Tom, Royal Purple, and Jenny Lind; 2nd, Mr. John Keynes, Salisbury, with Flora's Garland, Prince Albert, Splendour, Mayor of Oldham, Squire Meynell, Exit, Lord Rancliffe, Morgan May, Admiral Curzon, Splendid, Sarah Payne, and Mr. Ainsworth; 3rd, Mr. R. R. Oswald, New Vauxhall, Birmingham, with Sarah Payne, Flora's Garland, Premier, Friar Lawrence, Prince Albert, Falconbridge, Uncle Tom, Admiral Curzon, Beauty of Woodhouse, Comet, Lord Milton, and Lady Curzon.

Class B.—12 Picotees. 1st, Mr. Charles Turner, with Mrs. Lochner, Amy Robsart, Sultana, Mrs. Hoyle, Bessie, Green's Queen, Alfred, Mrs. Strahan, Mrs. Dodwell, Miss Puxley, National, and Charles Turner; 2nd, Mr. Keynes, with Mrs. Kelke, Theodore, Mrs. Barnard, Mrs. Norman, Countess, Amy Robsart, Mrs. Bayley, Miss Puxley, Dr. Pitman, Lady H. Moore, Venus, and Mrs. Hoyle; 3rd, Mr. R. R. Oswald,

with Miss Wake, Mrs. Drake, Lavinia, Bertha, Lady Grenville, Mrs. Kelke, Eugenie, Green's Queen, Finis, Mrs. Barnard, Venus, and Lady Franklin.

Class C.—Amateurs. 12 Carnations (not less than nine varieties). 1st, H. Steward, Esq., York, with Squire Meynell, Uncle Tom, Firebrand, Falconbridge, Sarah Payne, Falconbridge, Julia, Africanus, Admiral Curzon, Cradley Pet, Poor Tom, and Admiral Curzon; 2nd, Mr. E. S. Dodwell, Derby, with Premier, Lovely Ann, Exit, Sarah Payne, Lorenzo, Admiral Curzon, Black Diamond, Premier, Fanny, Sportsman, Seedling P. F., and Splendid; 3rd, Mr. Samuel Eyre, of Nottingham, with Lord Milton, Premier, Uncle Tom, Lord Rancliffe, Uncle Tom, Kossuth, Firebrand, Premier, Firebrand, Admiral Curzon, Unknown, and King of Scarlets; 4th, Mr. Samuel Brown, Birmingham, with Poor Tom, Admiral Curzon, Premier, True Briton, Friar Lawrence, Mr. Ainsworth, Uncle Tom, Premier, Uncle Tom, Lord Milton, Admiral Curzon, and Ascendant S. F.

Class D.—12 Picotees. 1st, Mr. E. S. Dodwell, with Eugenie, Mrs. Turner, Finis, Calliope, Helen, Mrs. Norman, Alfred, Amy Robsart, Lord Nelson, Rosetta, Miss Holbeck, and Mrs. Drake; 2nd, Mr. John Bayley, Derby, with Duke of Devonshire, Mrs. Turner, Amy Robsart, Calliope, Mrs. Turner, Seedling (heavy purple), Mrs. Norman, Finis, Amy Robsart, Miss Holbeck, Finis, and Venus; Equal 3rd, Mr. Samuel Eyre and Mr. Henry Steward: Mr. Eyre's stand contained Robin Hood, Mrs. Drake, Mrs. Eyre, Lord Nelson, Green's Queen, Mrs. Barnard, Duke of Devonshire, Amy Robsart, Mrs. Barnard, Miss Holbeck, Princess Royal, and Dr. Pitman; Mr. Steward had Lord Nelson, Mrs. Barnard, Alfred, Eugenie, Mrs. Headley, Amy Robsart, Mrs. Headley, Mrs. Drake, Florence Nightingale, Prince of Wales, Miss Holbeck, and Countess; 4th, Mr. Samuel Brown, with Mrs. Barnard, Amy Robsart, Mrs. Drake, Miss Holbeck, Miss Wake, Finis, Green's Queen, Amy Robsart, Mrs. Norman, Eugenie, Venus, and Finis.

Class E.—6 Carnations. Open to all. 1st, Mr. Charles Turner, with King John, Victoria Regina, Squire Meynell, Hope, Cradley Pet, and a Seedling S. B.; 2nd, Mr. E. S. Dodwell, with Lorenzo, Christopher Sly, Young Milton, Seedling P. F., Lovely Ann, and Admiral Curzon; 3rd, Mr. John Keynes, with Lord Rancliffe, Flora's Garland, Black Diamond, Firebrand, Prince Albert, and Squire Meynell.

Class F.—6 Picotees. 1st, Mr. Charles Turner, with Amy Robsart, Mrs. Lochner, Mrs. Dodwell, Charles Turner (Holland), Sultana, and Mrs. Hoyle; 2nd, Mr. E. S. Dodwell, with Mrs. May, Mrs. Headley, Mrs. Turner, Amy Robsart, Finis, and Mrs. Norman; 3rd, Mr. Henry Steward, with Countess, Finis, Venus, Mrs. Drake, Lord Nelson, and Miss Holbeck.

SINGLE SPECIMENS IN CLASSES.—OPEN TO ALL.

Scarlet Bizarres:—1st, Mr. Ainsworth, Mr. John Keynes; 2nd, Admiral Curzon, Mr. S. Eyre; 3rd, Ditto, Mr. Henry Steward; 4th, Ditto, Mr. J. S. Hedderley; 5th, Ditto, Mr. H. Steward.

Crimson Bizarres:—1st, Hope, Mr. Charles Turner; 2nd, Lord

Milton, Mr. Henry Steward; 3rd, Black Diamond, Mr. E. S. Dodwell; 4th, Hope, Mr. C. Turner; 5th, King of Carnations, Mr. John Keynes.

Pink Bizarres:—1st, Tenby Rival, Mr. C. Turner; 2nd, Ditto, ditto; 3rd, Rainbow, Mr. Wood; 4th, Premier (Puxley), Mr. C. Turner; 5th, Tenby Rival, ditto.

Purple Flakes:—1st, Squire Meynell, Mr. J. Keynes; 2nd, Premier, Mr. E. S. Dodwell; 3rd, Ditto, Mr. H. Steward; 4th, Julia, Mr. E. S. Dodwell; 5th, Ditto, Mr. Henry Steward.

Scarlet Flakes:—1st, Sportsman, Mr. J. S. Hedderley; 2nd, Ditto, ditto; 3rd, Ditto, ditto; 4th, Ditto, ditto; 5th, Ditto, ditto.

Rose Flakes:—1st, Uncle Tom, Mr. Henry Steward; 2nd, Lorenzo, Mr. E. S. Dodwell; 3rd, Flora's Garland, Mr. John Keynes; 4th, Lorenzo, Mr. E. S. Dodwell; 5th, Constellation, Mr. John Keynes.

Picotees. Red.—Heavy Edge. 1st, Mrs. Hoyle, Mr. C. Turner; 2nd, Ditto, ditto; 3rd, Mrs. Norman, Mr. J. S. Hedderley; 4th, Sultana, Mr. John Keynes; 5th, Mrs. Norman, Mr. James Taylor.

Red.—Light Edge. 1st, Charles Turner (Kirtland), Mr. C. Turner; 2nd, Ditto, ditto; 3rd, Miss Holbeck, Mr. E. S. Dodwell; 4th, Charles Turner, Mr. C. Turner; 5th, Ditto, ditto.

Purple.—Heavy Edge. 1st, Alfred, Mr. H. Steward; 2nd, Ditto, ditto; 3rd, Mrs. May, Mr. E. S. Dodwell; 4th, Lord Nelson, Mr. Wood; 5th, Mrs. Bayley, Mr. John Keynes.

Purple.—Light Edge. 1st, Finis, Mr. E. S. Dodwell; 2nd, Ditto, ditto; 3rd, Mrs. Eyre, Mr. S. Eyre; 4th, Ditto, ditto; 5th, Ditto, ditto.

Rose.—Heavy Edge. 1st, Green's Queen, Mr. C. Turner; 2nd, Ditto, ditto; 3rd, Venus, Mr. J. Taylor; 4th, Alice, Mr. C. Turner; 5th, Venus, Mr. John Keynes.

Rose.—Light Edge. 1st, Mrs. Turner, Mr. E. S. Dodwell; 2nd, Bertha, Ditto; 3rd, Mrs. Barnard, Mr. John Keynes, 4th, Ditto, ditto; 5th, Ditto, ditto.

Premier Carnation, selected from the entire exhibition:—Admiral Curzon, exhibited by Mr. Henry Steward.

Premier Picotee, also selected from the entire exhibition:—Mrs. Eyre, exhibited by Mr. Samuel Eyre.

Twenty-three stands, each of twelve blooms; and fourteen, each of six blooms, were staged for competition, with about 400 single specimens.

Three first-class certificates were given for Seedlings:—To Sportsman, exhibited by Mr. Hedderley, of Nottingham, a scarlet flake Carnation, of a bright colour and very true marking: it is a sport from Admiral Curzon;—to Mrs. Eyre, exhibited by Mr. Eyre, of Nottingham, a light purple-edge Picotee; it has a true-veined edge, large petal, and is a full-sized flower;—to Charles Turner (Kirtland), a bright rosy red-edge Picotee, light; the white of this flower is very pure, without the least spot or bar, and much the best of its class. It was exhibited by Mr. C. Turner, of Slough. Six blooms were also exhibited of Earl Stamford, a promising purple flake Carnation.

Dodwell's Mrs. Turner, a light rose-edged Picotee, was shown very fine by the raiser, and is a first-class flower. We do not know any variety that has so fine a petal.

To Mr. George Tye are due the thanks of the Society for this very successful meeting of the National Carnation and Picotee Society.

The exhibition for 1857 will be held at Manchester.

HIGH-CLERE,

THE SEAT OF THE RIGHT HON. THE EARL OF CARNARVON.

THIS princely demesne is situated near the Newbury and Andover road, distant about six miles from Newbury. The mansion, an elegant castellated building by Sir Charles Barry, stands on an eminence in the centre of an extensive and beautiful park, of about 2000 acres, the whole of which is undulated in the most pleasing manner; in fact, there are few parks in the kingdom which display a surface more varied, or scenery more interesting. The pleasure-grounds are on a most extensive scale, and, like the park, present a great diversity of surface. The whole is laid out with excellent taste, and contains a rich collection of trees and shrubs. Highclere has long been celebrated for its magnificent Rhododendrons. Mr. Carton, so well known as one of the most successful hybridisers of his day, was for a number of years gardener at this place, and his attention was particularly directed to the raising of new varieties of this plant. Of his success the numerous fine hybrids produced from R. arboreum, maximum, caucasicum, ponticum, &c., give abundant evidence.

Near the mansion are numerous beds principally filled with a choice selection of Rhododendrons and Azaleas. The greater part of these have been taken up and re-arranged by Mr. Phipps, his lordship's gardener at the present time. There are also numerous detached clumps, belts, and single specimens throughout the whole extent of the grounds. We noticed one plant, of the arboreum family, 15 feet high, and 10 feet through, which had been a complete mass of bloom. The use of Laurels is to a great extent superseded by the Rhododendron; for the various purposes for which Laurels are used the Rhododendron answers well, with the decided recommendation of being one of our gayest flowering shrubs. In some parts of the grounds the walks are flanked by shelving banks to the height of twenty or thirty feet; these are clothed with dense masses of Rhododendrons, the effect of which when in bloom is grand in the extreme.

Besides the numerous attractions presented by the park and pleasure grounds, there are several pieces of artificial water. "Milford Lake," about 22 acres in extent, is of the most interesting character, its banks are indented by numerous bays and inlets, while at other parts they rise boldly to a considerable height. The Rhododendron is used here with the best effect; the promontories are in part covered by large masses of that plant, while in different parts large masses of rockstone protrude. These, with a variety of appropriate trees, give to the whole a wild and picturesque appearance, which is much more pleasing to the taste of most people than the smooth even banks of many, in other respects, beautiful lakes.

In a low situation near the above lake we noticed remarkably fine specimens of Abies Douglasi and A. Menziesi, the latter of which undoubtedly enjoys a damp situation. The specimen in question is remarkably vigorous, without the slightest tinge of brown,—so common to it in high and drier places.

In a small garden detached from the pleasure ground is a range of Vineries, in two divisions, each about 38 feet in length. The Vines have been planted by Mr. Phipps; one planted in the summer of 1854 has this season produced a heavy crop of Grapes of excellent quality. The other division was planted last summer—1855—and in this the rods are unusually strong.

Thinking that the system of preparing the borders, &c., as practised by Mr. Phipps, might be of interest to some of our readers, we requested a few particulars, which were very obligingly supplied. In the making of Vine borders Mr. P. considers thorough drainage of the greatest importance. To insure this, broken bricks and rough stones are placed over the bottom of the intended border to the depth of two feet, and over this some turfs to prevent the smaller particles from choking the drainage. On this is placed a compost of the following ingredients:—three loads of turfy loam, one of fresh horse droppings, one of lime and brick rubble, and half a load of leaf-mould. In about a week from the time the border is made it will be found that the mass will have become moderately warm. The Vines are then planted and kept in a moist and rather close atmosphere for about a month, by which time they will have rooted into the border and be growing freely; they are then inured to more air, which in a short time is given in great abundance. Mr. P. considers June the best month for the planting of young Vines. The kitchen garden consists of about four acres of land, in which is a quantity of wall and other fruit trees, all of which are under the best management. There is also a French flower garden, designed and laid out by Mr. Phipps; the beds are filled with a choice variety of Geraniums, Verbenas, &c., which have a gay appearance.

His lordship kindly allows the whole of the gardens and pleasure grounds to be opened to the public twice a-week—Wednesdays and Saturdays.

LOOKER'S PATENT IMPERISHABLE GARDEN LABELS.

We have tried some of these labels, which are very neat, durable looking things, and much better adapted for placing out of doors than any form of painted label, which are soon acted upon by the atmosphere. These have the letters coloured with some kind of vitrified black, which brings out the letters effectively. They are cheap, and we can recommend them to our readers for labelling hardy plants, as the best that have come under our notice.

THE AIREDALE HORTICULTURAL SOCIETY.

We do not often notice the proceedings of the various horticultural exhibitions so frequent in the midland and northern districts; but happening to be in the vicinity of Bradford on the 19th ultimo, we paid a visit to Shipley, for the purpose of seeing what progress had been made in that district in the culture of plants and flowers. We found a long and spacious tent well filled with plants, cut flowers, fruits, and vegetables, some few of the plants showing evidence of good culture, particularly the twelve stove and greenhouse plants exhibited by Mr. Charles Henderson, gardener to R. Milligan, Esq., Acacia, near Bradford, and which gained the first prize—a silver cup. Among these, Gesnera Merki and Schubertia graveolens were very good, as also was Tritonia aurea, a plant excellently adapted for conservatory decoration, as it blooms so freely late in the summer. The second prize was awarded to E. Ward, Esq., Bradford, for plants by no means equal to those we saw at Bradford last year from the same grower. A very fine Oncidium flexuosum obtained the first prize for single specimens of Orchids. Four good stove and greenhouse plants exhibited by Mr. Henry Tuke, gardener to R. Nickolls, Esq., Bramley, near Leeds, were awarded a first prize. These were Allamanda neriifolia, Aphelandra cristata, very fine, Cyrtoceras reflexum, and Begonia Prestoniensis. Achimenes were somewhat extensively shown, but Ambrose Verschaffelt, Sir Treherne Thomas, reticulata, and one or two other very fine and distinct varieties, do not seem to be known by the exhibitors, or they would certainly use them. Geraniums were also shown extensively, and were badly grown, or rather flowered. As a general rule, they are overpotted and not grown hardy enough. Sufficient air is not given to them in a growing state, and the wood becomes soft and produces only a few blooms and those of very inferior quality. These remarks apply not only to the growers in that neighbourhood, but generally, and we regret that the simple instructions given monthly in our pages are not followed, or at least read more closely. Nothing pains us more than to see these plants so terribly mismanaged. Similar remarks apply to Verbenas, as these are generally grown too tenderly, as was shown by several of the collections exhibited. Two of the collections, however, showed better culture, but there was still room for improvement. They should have plenty of air and light, and be kept clean from insects. Fuchsias were shown better, and six plants which obtained the first prize, exhibited by Messrs. Leach & Son, of Bradford, were very good, and included a fine plant of Venus de Medici, but the blooms were not in good character. It is evidently a free-growing variety, and we doubt its blooming in fine character this season, thinking it will bloom finest from older wood. Mr. Parkinson, of Bradford, also had some good plants. Some very good Petunias were exhibited, including Hermione, Dr. Andry, which is one of the best and brightest coloured striped varieties, Alba magna, Major Domo, and Sappho. No one exhibited the new double white variety, Imperial. We heard doubts expressed as to its usefulness.

All those who are at all sceptical should see beds of it in full bloom at the Royal Gardens, Frogmore, where it may be seen covered with clear white flowers. It is an excellent pot plant, but should be grown hardy and not nursed too much. As usual at these meetings, a large number of cut flowers was shown, many of which had not received the care in growing due to them, and seemed to have been cut merely as chance directed. This was particularly the case with Verbenas. In Yorkshire, for some time past, violent thunderstorms and wet gusty weather have prevailed. Under such circumstances bell glasses or some other substitute (of course mounted on small pots) should be placed over the blooms four or five days before the show. Many of the Dahlias also showed that sufficient care had not been taken in protecting them. Some of the Carnations and Picotees were of tolerable quality, but many very fine sorts have not yet found their way generally into this district. Exhibitors at these provincial shows would also do well to invent some better plan of carrying their cut flowers than placing them indiscriminately in a basket and selecting them in the tent. Of course this remark does not apply to all, but it does apply to many; and we hope they will take it in the spirit in which it is offered, bearing in mind that what is worth doiug is worth doing well. The first prize of two guineas was most deservedly awarded to Mr. George Edwards, of York, for 24 Dahlia blooms, and although the season is late here, these were fine, particularly a noble bloom of Lord Palmerston, one of the finest flowers yet sent out; Salvator Rosa, Ablitt's Incomparable, Cossack, Mrs. Wheeler, Yellow Beauty, Yellow Victory, Lord Bath, Fanny Keynes, Corsair, Miss Burdett Coutts, Ruby Queen, and Lollipop; the second prize was awarded to Mr. Schofield, Leeds; and the third prize to Mr. T. Milner, Bradford. In the class for twelve Dahlias Mr. Edwards was again victorious, with good blooms, including many of the new sorts; the second prize was awarded to Mr. Harrison, Darlington; and the third to Mr. T. Milner, who also exhibited a very promising seedling Dahlia named Airedale Beauty, of Bathurst form, with close high centre and good outline, and of a rosy purple colour. Several Cucumbers were shown, among them a fine specimen of the Himalaya fully 24 inches long, exhibited by Mr. Croft, gardener to A. Harris, Esq., of Bingley, and which obtained a second prize. This is a handsome black-spined variety, with very short heel, but the specimen was rather too old. We should like to see the names attached to plants and flowers more generally at these shows. A great number of the cut flowers and plants were not named. This should be done, as it enables visitors to make notes of any of the varieties exhibited. We hope to see this done another season, and the detestable practice of *smoking in the flower tents* put a stop to. It should be borne in mind that many of the gentry who visit these shows are in the habit of attending the metropolitan exhibitions, and to them the comparison must be very apparent. It is also a practice that would be more honoured in the breach than in the observance. Surely, while contemplating the beauty of plants and flowers in a confined space, pipes and cigars may be abandoned.

NOTES ON THE MONTH.

WELL, August has passed away from us, and a downright old-fashioned summer month it has been; for, with the exception of a few partial thunderstorms, we have had no rain since the middle of July, and up to the 17th the weather was truly tropical, the thermometer ranging by day between 80° and 90° in the shade. On the 17th and 18th the temperature was perceptibly lower, with rain on the former day, accompanied with an east wind of considerable force. The extreme high temperature of the last month has brought to maturity the grain crops very rapidly. Wheat good everywhere. Barley and Oats the same, except on very sandy or brashy soils, where they have ripened too quickly, and Barley especially has suffered in quality. Agricultural green crops wanted rain, and in many places Swedes are late or thin, from the ravages of the fly. Potatoes seem good everywhere, excepting on poor sands, where the hot weather in June appeared to *set* them, and in many instances they have made but little progress since; in these cases the crops will be very small, which however will be more than compensated for by the fine appearance of those on heavier soils. In this neighbourhood, generally speaking, the disease has shown itself only partially, and the bulk of the crops is still looking green and healthy; this augurs well, and we may still hope for a fair crop of this useful root. The prize Potato this season will unquestionably be the Fluke, which withstands the effects of drought better than any other, and the crops will be great.

Garden produce, like that of the farm, has suffered more especially where a shallow soil or bad management had not provided a good depth of open soil for the plants to root in. The past month will teach many a gardener a useful lesson of the advantages of well trenched ground for summer crops. Peas, Beans, Cauliflowers, Lettuce, have hardly been kept moving, even with the assistance of the water-pot; and where they had not good, free, open soil they have suffered much, and in many instances failed altogether. A word on watering. Soak what you water well, not merely pouring a little water round the stem of the plant, but soak the surrounding earth; this may be only once or twice a week, but it will do more effectual good than daily sprinklings, where only the surface is wetted, or just round the plant, which the dry atmosphere and dry soil adjoining quickly absorb, and leave your plants very little if any the better. We say again, water thoroughly plants requiring it, and mulch if practicable, but to give water to plants in driblets, such weather as we have had, is useless. The season for transplanting evergreens is now upon us; the wood this season will ripen early, and therefore planting may commence as soon as a favourable state of the weather occurs. A good plan with large trees is to open a trench round them at a distance according to their size, leaving the ball, but carefully taking up and preserving the roots in throwing out the trench, and cutting clean the ends of those broken by the operation. A little half decayed litter or leaves may then be thrown over the roots, to preserve them from the air; this will stop

the tree from making further growth, and in two or three weeks they will be in capital condition for transplanting. When the tree is removed the roots taken up previously will be found calloused, in some instances making fresh roots, and just in a condition to take hold of the new soil when planted. Another note we have made, and must press its adoption to all who have fruit trees, whether wall, espalier, orchard, or Gooseberry bush, the principle is the same, and that is, "*summer pruning.*" I have not time to write a bit of physiology to show "the reason why," but must insist that it exists, and can be forthcoming any day; take my advice, therefore, and proceed at once to remove all and every bit of wood made this season, excepting what you can easily foresee will be wanted for bearing, or filling up the trees where too thin. It is a positive waste of power to allow these to remain any longer, and I should have noticed this last month, had not my friend the editor told me he was full of matter, and kept me back. However, go over every tree and cut out to within two or three eyes of their base this summer wood on Apples, Pears, Plums, some Cherries and Gooseberries and Currants; it will strengthen the embryo fruit buds for next year, and help the formation of those for the year after: and by leaving the terminal or leading shoots on Apples and Pears untouched, you will frequently find fruit buds form on them also, when the useless wood has been removed in August or September.

Flower-gardens are everywhere a perfect blaze of beauty. This weather has brought out in all their glory Geraniums, Verbenas, and Petunias; Calceolarias do not like it quite so well.

The Horticultural Society appears to "drag its feeble strength along." Is its present position a transition state to a better state and wiser management, or to Mr. Stevens' hammer? Horticulture is everywhere flourishing, except at its head quarters at Chiswick; the great body, however, is sound and healthy, and will, like other things, right itself in time. G. F.

METROPOLITAN HOLLYHOCK AND DAHLIA EXHIBITION.

An exhibition of the above popular flowers was held at Cremorne Gardens, Chelsea, on the 19th and 20th ult., and was most successful and satisfactory. Great care had been exercised in framing the schedule, which those whom it most concerned freely and gratifyingly acknowledged; and evident satisfaction was manifested by those who, in spite of the unmitigated rain, found their way to the gardens, which are admirably adapted to horticultural fêtes.

Dahlias might have been finer and more numerous; but such cannot be said of the Hollyhocks; these were, considering the intense heat of the weather, and its duration, far beyond what was expected. One hundred and sixty spikes, for the most part fully three feet in height, closely yet symmetrically set with bloom, the flowers giving an average diameter of five inches, and of those peculiarly bright shades of colour

for which the Hollyhock is so notable, were staged, the contributors being Messrs. Bircham & Ward, Mr. Chater, Messrs. Paul, the Rev. C. Fellowes, Mr. Grant, H. Bowler, Esq., C. J. Perry, Esq., and Mr. C. Turner. The collections of cut blooms were no less abundant, and of a quality quite unique. The Dahlias, as a whole, were not good, but as the *best* growers of the country contributed, and competed with *their* best, this must be attributed solely to circumstances of weather and season. The eminent Norwich growers, Mr. C. Grant, G. Holmes, Esq., the Rev. C. Fellowes, together with Messrs. Turner, Keynes, Legge, Walker, Kimberley, J. Cook, Esq., C. J. Perry, Esq., Messrs. Wyness, Pope, &c., were foremost amongst the cultivators, as the annexed awards will demonstrate. Nor was the meeting without interest in the way of seedling novelties. Roses were well shown by the Messrs. Paul, whose collection comprised four first-rate boxes, containing fifty bunches. Messrs. E. G. Henderson, of the Wellington Nursery, St. John's Wood, considerately contributed a van load of Coniferous plants, which, tastefully grouped, formed an admirable centre for the display of the Hollyhock spikes staged around them. The Messrs. F. and A. Smith, of Dulwich, also made a good display with thirty specimen Balsams.

The censors for Hollyhocks—Mr. Downie, Edinburgh; Mr. Parsons, Welwyn; and Mr. Turner, Slough; for Dahlias, Mr. Spary, Brighton; Mr. Holmes, Hackney; and Mr. J. Robinson, Pimlico, furnish the following awards:—

Hollyhocks.—11 Spikes. 1st prize, Messrs. Bircham and Ward, Solfaterre, Souvenir, Pourpre de Tyre, Lemonade, Purple Perfection, Brennus, Seedling, Fireball Superb, Standard, Vesta, and Hon. Mrs. Ashley; 2nd, Mr. W. Chater, with Lady Middleton, Walden Masterpiece, Saturn, Resplendens, Canary, Autocrat, Beauty of Walden (a first-class certificate, with the prize for the best pink or rose spike were awarded to this variety), Empress (best buff or yellow), Géant des Batailles, Fanny, and Mont Blanc; 3rd, Messrs. Paul, with Primrose Perfection, Memnon, Pourpre de Tyre, Narcissus, Mrs. Oakes, Hedenham Rival, Beauty of Cheshunt, Solfaterre, White Globe (best white spike), Glory, and Hon. Mrs. Ashley.

9 Spikes. 1st prize, the Rev. C. Fellowes, with Solfaterre Improved (best yellow spike, as also the best spike in the exhibition), Lilac Model (best spike mottled light), Fireball Superb, Purpurea elegans (best purple or plum spike), Hon. Mrs. Ashley, Mrs. Oakes, Unique, Brennus, and Lemonade Improved; 2nd, Mr. C. Grant, with King of Yellows, Eva, Pourpre de Tyre, Beauty of Cheshunt, Souvenir, Solfaterre, Yellow Model, Seedling, and Hon. Mrs. Ashley; 3rd, H. Bowler, Esq., with Atropurpurea, Hon. Mrs. Ashley, Unique, Joseph Clarke (to this was awarded a first-class certificate), Mrs. H. Bowler, Lilac Model, Queen, Solfaterre, and a Seedling. 4th, Mr. C. J. Perry.

24 Blooms. 1st prize, Mr. C. Grant; 2nd, the Rev. C. Fellowes, 3rd, H. Bowler, Esq.; 4th, Mr. C. J. Perry. The best varieties in these stands were for the most part those shown in spikes.

24 Blooms (Dealers). 1st prize, Mr. W. Chater; 2nd, Messrs. Paul. The best varieties of these two collections were Exquisite, Nil

Desperandum, Sulphur Queen, Ceres, Atrosanguinea, Rosy Morn, Lilacina, Grandis, Masterpiece, Queen of Buffs, Ruby Queen, Canary, Purple King, Leonora, Lady Middleton, Lilac Queen, Beauty of Walden, Autocrat, Sceptre d'Or, Ignea. These are all Mr. Chater's varieties, and include many of his finest seedlings, yet to be sent out. In Messrs. Paul's stand we observed Walden Rival, Lord Jocelyne; Pourpre de Tyre, Mrs. Oakes, Memnon, Purple Perfection, Mr. Adams, White Globe, Beauty of Cheshunt, Eclipse, Hon. Mrs. Ashley, Blushing Bride, Solfaterre, Charles Baron Improved, Criterion, Hope, Rosy Morn, and Omar Pacha.

Dahlias.—24 Blooms. 1st prize, Mr. C. Turner, with *Sir John Franklin, *Col. Windham, Malvina, Captain Ingram, Incomparable, Sir F. Bathurst, *Bessie, *Lord Palmerston, *Grand Sultan, Amazon, Rachel Rawlings, Harbinger, Sir C. Napier, *Lord Bath, Eclipse, Espartero, Sir R. Whittington, and Duchess of Cambridge; 2nd, Mr. H. Legge, with *Admiral, Sir C. Napier, Crimson King, Amazon, *Mr. Seldon, Duchess of Kent, Glenlyon, Beauty of the Grove, *Mrs. Legge, Robert Bruce, Rachel Rawlings, *Duke of Wellington, Magnet, Le Phare, *Louisa Glenny, Port Wine, Roundhead, and Jullien; 3rd, Mr. Keynes, with *Lord Palmerston, *Lollipop, *Sir F. Bathurst, *Lady Folkstone, Cœur de Leon, Malvina, *Sir J. Franklin, *Rachel Rawlings, Dr. Gully, Bessie, Reginald, Archbishop of Canterbury, Admiral Dundas, Lord Bath, Sir C. Napier, Sebastopol, and Annie; 4th, G. Holmes, Esq.; 5th, the Rev. C. Fellowes; 6th, Mr. Walker.

Private Growers.—24 Blooms. 1st prize, Mr. C. Grant, with *Miss Caroline, *Pre-eminent, *Lord Palmerston, Fanny Keynes, Malvina, Robert Bruce, *Cossack, Amazon, Lady Mary Labouchere, Lilac King, Lord Bath, Yellow Beauty, Sir C. Napier, Lollipop, The Nigger, Sir J. Franklin, Bessie, Miss Burdett Coutts, and Duchess of Wellington.

12 Dahlias. 1st prize, J. Cook, Esq., with Salvator Rosa, Lollipop, Rachel Rawlings, Constancy, Beauty of the Grove, Beauty of Slough, Duchess of Kent, Miss Caroline, Empress, Sir F. Bathurst, Colonel Windham, and Essex Triumph; 2nd, G. Holmes, Esq., with Lord Palmerston, Caroline, Sir C. Napier, Sir J. Franklin, Cherub, Diadem, Yellow Beauty, Sir F. Bathurst, Miss Burdett Coutts, Bijou, The Nigger, and Lollipop; 3rd, the Rev. C. Fellowes, with Fanny Keynes, Miss Caroline, Mrs. Wheeler, Lilac King, Rachel Rawlings, Lord Bath, Marion, Amazon, Miss Burdett Coutts, The Nigger, Lollipop, and Duchess of Wellington; 4th, C. J. Perry, Esq.

Fancy Dahlias.—24 Blooms. 1st prize, Mr. Keynes, with *Charles Perry, *Conqueror, *Polyphemus, *Carnation, Lady Grenville, *Jonas, *Empereur de Maroc, Mrs. Hansard, Miss Frampton, *Duchess of Kent, Mrs. Spary, Pigeon, *Model, and some unnamed seedlings; 2nd, Mr. C. Turner, with *Eugenie, *Butterfly, *Marvel, *Pigeon, La Vogue, Inimitable, *Enchantress, *Duchesse de Brabant, *Comet, Empereur de Maroc, Mrs. Hansard, Admiration, Miquette, Kossuth, Laura Lavington, Phaeton, and Gloire de Kain; 3rd, Mr. H. Legge, with Butterfly, *Triomphe de Roubaix, *Vasco de Gama, Baron d'Arme, Malvina, Attraction, Mrs. Hansard, Annie Miquet, Duchess of Kent, Princess Charlotte, Snagretta, Laura Lavington, Gloire de Kain,

Phaeton, Pigeon, Juliana, Lady Grenville, Liliput von Branduth, and some seedlings.

12 Fancies. 1st prize, the Rev. C. Fellowes, with *Enchantress, Topsy, Triomphe de Roubaix, Inimitable, Eugenie, Miss Ward, Lady Grenville, Comet, *Pigeon, and Kossuth; 2nd, C. J. Perry, Esq., with *Triomphe de Roubaix, Pigeon, Marvel, *Gloire de Kain, Jonas, *Butterfly, Reine des Belges, Uncle Tom, and Comet; 3rd, Mr. C. Grant, with Enchantress, *Triomphe de Roubaix, *Empereur de Maroc, Duchess of Kent, Reine des Fleurs, *Wonderful, Gloire de Kain, Cockatoo, and Comet.

Note.—Those Dahlias to which a (*) is affixed, had duplicate specimens shown in the same collection.

First-class certificates were awarded to Fancy Dahlia Polyphemus (Keynes), flaked rose and purple; to Fancy Dahlia Model (Keynes), also flaked rose and purple, but of distinct shades; and to Dahlia Mrs. Legge (Legge), orange ground, with red or cherry tips. Lady Popham (Turner), white, with chaste tip of purple, is of first-rate merit; a single flower only was staged. Fenella (Holmes), is a small flower in the way of Amazon. Unique (Turner), orange and red. Of these we shall report more fully as the season advances.

PEAS AND CAULIFLOWERS.

YOUR notice of these productions last month is useful, by way of informing us of the comparative merits of the vegetables reviewed. If you will allow me to recommend, as a second early variety, Prizetaker, a new variety belonging to the Marrow tribe, your readers will not be disappointed in growing it. It is suitable for either garden or field culture; grows three feet high, is a prolific bearer, and the produce resembles the Green Marrow in colour and flavour. I have tried it as a field crop, as well as in the garden, and can recommend it. As a later Pea, I have found none to possess so many good points as Hairs' Dwarf Mammoth; this I consider fully equal to the best tall Peas as regards flavour, it continues in bearing a very long time, and even when old the Peas boil green. From its not growing more than four feet high it is easily supported, and I venture to say no Pea will stand hot weather so well; it rarely mildews, and is, for a summer crop, the best Pea out.

Your readers should try the Standhouder Cauliflower, much superior to the Walcheren, or any other Cauliflower, for a summer crop. It is more especially valuable for autumn use, and where known will supersede all other kinds; sown in May and June, and planted out at two or three times, it will afford an unfailing supply of snowy white heads up to Christmas. I have seen nothing so good.

ON HYBRIDISING FRUITS.

We beg to refer our readers to a paper inserted elsewhere in our present number, from a correspondent who signs himself "A Country Rector." Our correspondent has broached an important subject, which certainly has been neglected, but not exactly to the extent he states. It is quite true that many of the most valuable fruits of the present day, excepting Pears and Strawberries, were cultivated more than a century ago, but still there have been some valuable varieties raised since that time. Foremost amongst those who devoted their time and practical knowledge to this subject, was the late President of the Horticultural Society—Mr. T. A. Knight, of Downton, who, as well as Mr. Willliams, of Pitmaston, raised many valuable productions. To the former we are indebted for the Acton Scot, Spring Grove, and Mountaineer Peaches, and Downton Nectarine (a valuable kind); for many good varieties of Cherries—as the Elton, Black Eagle, and others; and for a great number of Pears and Apples—of the former, Monarch, Broompark, Eyewood, and Althorp Crassane are well-known and appreciated kinds, as are many of his seedling Apples. Mr. Williams raised the Pitmaston Orange Nectarine, some Plums, Grapes, and Gooseberries, all of which possess merit. The character of the fruit raised by Mr. Knight attests the soundness of the principles he followed in hybridising, viz., to obtain high-flavoured fruit, on plants endued with a hardy constitution, so as to withstand the vicissitudes of our uncertain climate, a point which should always be kept in view by hybridisers.

Notwithstanding the success of the above gentlemen, and of the originators of new Strawberries, which within these few years have been very much improved, our correspondent's remarks are very pertinent to the question, for assuredly we have not made that progress in originating new fruits as our neighbours on the Continent, or even in America. The Horticultural Society ought to have been at the head of this movement, but they have themselves done nothing worth recording in this way, and have given but little encouragement to those who have endeavoured to try the experiment. We confess we are somewhat surprised that no private individuals have taken the matter in hand as a commercial speculation, for we are assured a wide field is before them; and, we venture to say, not an unprofitable one either. This is still more surprising, seeing the rapid progress made by hybridisers of florists' flowers, through whose exertions those beautiful varieties of Pelargoniums, Cinerarias, Heaths, &c., which adorn our exhibition tables, have been produced, certainly not a *loss* to their respective raisers; and we advise those willing to enter into the prosecution of raising new fruits, that a good market may at once be obtained for anything in the fruit way they may succeed in obtaining above the merit of ordinary kinds, as we may gather from the avidity with which inferior kinds, which in many instances are palmed upon the public, are purchased.

The principal objects to aim at in raising new varieties of fruit from

seed, is, first, to secure as much vigour and hardiness in the progeny as possible; for this purpose, one of the parents, at least, should possess these properties. New fruits will be valuable just in proportion to their power of withstanding the unfavourable effects of our climate. Next, that it should be an object to obtain seedlings which ripen earlier or later than varieties now cultivated. An Apple, Peach, or Apricot, which could be produced to ripen a week or ten days before existing kinds, would be valuable; and so with some kinds of fruit which should ripen later. Thus it is very possible to obtain Plums as late as the common Damson and Quetch, with a flavour approximating to the Green-gage, and hardy enough for orchard planting. Again, melting Peaches, of good flavour, have not hitherto been met with later than September. We see no reason why Peaches ripening in October and November should not be obtained of a good flavour; indeed, we know such will be the case, as we have one already in a recent introduction—the Salway Peach—which melts perfectly, and is exceedingly good, though ripening in November. We have said nothing of the Grapes, from which great things may be expected, but hope our remarks will put some of our clever men on the alert, and we are confident we shall soon have an improved class of fruits.

[ED. "FLORIST."]

CALENDAR FOR THE MONTH.

Auriculas.—If not re-potted, let it be seen to at once, and but little attention will be required for some time to come. Give plenty of air, a moderate supply of water, look carefully for dead foliage and green fly. Prepare a cool well-drained border, place the plants in a frame on this, and, except in wet weather, take off the lights, that they may receive plenty of air.

Azaleas.—Plants that have their bloom buds prominent may be kept out of doors until towards the end of the month, if the weather be mild and favourable. Before being taken under glass they should all be carefully looked over for thrips. Give the young plants more air, and let them have all the light possible after this, so that the late growths may ripen.

Camellias.—In fine dry weather these may have a syringing now and then. After heavy rains, examine the drainage of any that show the least sign of its being imperfect.

Carnations and Picotees.—Be attentive to watering, cut all dead foliage cleanly away from the layers; these are the principal attentions required for some time to come. Keep tolerably dry and well turned the soil required for wintering the plants in small pots.

Cinerarias.—Look well for mildew, attack it on its first appearance. Use sulphur; when properly applied it is a certain remedy.

Cold Frames.—These should be cleaned, repaired, and made ready for all manner of things: an empty frame oftentimes comes in very useful when King Frost comes on us rather suddenly. Put a little fermenting material into one, just sufficient to cause a gentle heat,

cover this with about three inches of light sandy soil. Fill this with cuttings of the different bedding plants. Shade, &c. In two, or, at most, three weeks, the greater portion will be fit to pot off, and the sooner they are potted the better, as they will get established before the short days set in, and stand the winter better.

Conservatory and Showhouse.—Give abundance of air, night and day, as long as the state of the weather permits. Shading should now be dispensed with, as the permanent occupants require all the light they can have after this to mature their wood. If any painting or glazing is wanted to be done, the present is a very good time for performing these operations. Every part of these structures should receive a thorough cleaning before the plants are got in. If the weather continue fair many things may continue out until the end of the month.

Cucumbers.—Those intended for winter forcing should be planted out immediately, if not done last month. Give them plenty of air, and a temperature of about 60° at night; give them every chance to make strong, vigorous growth for the next six or eight weeks, you will then have little difficulty in getting plenty of fruit during the winter months. Keep a moist growing atmosphere to plants in bearing, and use every means to keep them clear of green-fly and thrips.

Dahlias.—Carefully protect such blooms as may be required for exhibition; thinning the shoots and disbudding will have been completed by this time. Those that are grown for display in the garden only should have the laterals cut away, or there will be more foliage than bloom. Seedlings will require constant attention, particularly if they have not proper distance afforded them in growing, or some of the finest flowers may be overlooked.

Flower Garden.—The strictest attention in trimming all rambling growth, in removing all dead flowers, leaves, &c., will now every day become more and more necessary, to keep up the beauty and effect as long as possible. A few degrees of frost, a strong wind, or a heavy shower of rain, will destroy the beauty of any garden, if great care is not immediately paid to put everything into as neat a trim as possible.

Forcing Hardy Shrubs.—Scarlet Thorns, Lilacs, Roses, Azaleas, Rhododendrons, Kalmias, &c., should be potted early, so as to get them well established, to ensure their flowering properly.

Fruit (hardy).—Look over the Peach and Nectarine trees, to see if any of the shoots want stopping or nailing in. Protect fruit of every kind from wasps and birds. A little short Grass from the lawns, put about three or four inches thick at the foot of the walls, will prevent Peaches and Nectarines from injuring, if any fall off. Get the fruit room into proper order for the reception of the winter stock. Gather the fruit as it arrives at maturity. It should be all gathered by hand, and very carefully, especially all intended for keeping.

Greenhouse (hard-wooded).—This should be put into thorough order before the plants are brought in. If any painting or glazing is wanting, the present is the time to do it. Get the plants in towards the end of the month, before heavy rains or frost come on—the tender sorts first. The pots should all be well washed, and the plants neatly tied and fresh labelled. After they are housed, the side sashes should be kept open,

except during strong winds. They will require proper attention to watering, &c. *Soft-wooded Plants.*—Pot off all cuttings that are struck, so that they may get well established before winter sets in.

Hollyhocks.—Continue to put in cuttings or plant them out in beds; a large stock of plants can be procured if diligently attended to. Re-pot those first struck, but do not let them become pot-bound, or they will start into premature bloom.

Kitchen Garden.—As cropping for the season is over, the greatest attention should be given to all crops planted out; their growth should be encouraged as much as possible, by hoeing and stirring the soil between them. Continue to earth up Celery when it is dry. Tie up Endive to blanch.

Orchard-house.—As the trees will now have done growing, and the fruit will be ripe and ripening, much water will not be required. Any trees that are cleared of fruit should be kept well syringed, to keep the foliage healthy as long as possible. They will need all the air possible.

Pansies.—Plant out those first struck for early spring bloom. Pot up those required for early work towards the end of the month. Continue to put in cuttings. Sow seed not later than the first week in this month; if any is saved after this time reserve it for spring sowing.

Peach-forcing.—See directions in previous Calendars.

Pelargoniums.—Finally re-pot plants required for early blooming towards the end of the month. Stop first struck cuttings to make bushy plants. Let all plants be well housed, and kept warm and dry; give plenty of air during the morning. Late young stock should be pushed along. Geraniums, to flower well, must make their principal growth before Christmas.

Pinery.—Plants in fruit should have liberal supplies of water, a regular bottom heat, as much air in the early part of the day as can safely be given, always closing early in the afternoon; fires will not be requisite yet.

Pinks.—Towards the end of the month plant out for next season's bloom. If the weather should be wet, defer it for a short time. Plant in good rich soil—Pinks thrive best in that.

Pleasure Ground.—Sweeping will now be almost daily necessary, in order to keep up a tidy appearance. Towards the end of the month leaves will begin to be troublesome, especially if the weather be wet and windy. This is the best month in the whole year for transplanting evergreens.

Stove.—Achimenes, Gesneras, Gloxinias, &c., should be gradually dried off. Gloriosa going out of flower will require less water. Give plenty of air, but shut up early.

Strawberries for forcing.—See Calendar for last month.

Tulips.—Look to the roots, green-fly are apt to attack them; keep perfectly free from these. Prepare soil for blooming them in.

Vinery.—Ripe Grapes at this season require a dry atmosphere and thorough ventilation; make fires in cold wet weather. The late crop of Grapes, which will be colouring towards the end of this month, will require a little fire heat and plenty of air. Vines intended for very early forcing should now be pruned, and the lights should be put on the house.

Erica Spenceriana.

Plate 118.

Printed by C. Chabot

ERICA SPE[illegible]

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hands is the entire st[illegible]
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n named Spenceriana. [illegible]
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NOTICES [illegible] PLACES

Mr. Rivers' Nur[illegible]

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ERICA SPENCERIANA.

(PLATE 118.)

FOR the opportunity of figuring the beautiful variety of Cape Heath which this month forms the subject of our plate we are indebted to Mr. Glendinning, of the Chiswick Nursery, in whose hands is the entire stock of it. It is a cross between depressa and hybrida, and is, we need scarcely say, one of the most striking of the many successful results which have of late, in so many classes of plants, followed the employment of the art of the hybridist. It is, as will be seen, a most profuse bloomer, and to a colour new among Heaths it adds an excellent habit of growth. It has been distinguished by prizes which have been awarded it by the Horticultural Society, the Royal Botanic Society, and by the Crystal Palace Company, at their grand display of plants and fruit at Sydenham in June last. Such commendations surely render it well worthy of attention, and therefore we have felt it to be our duty to bring it thus prominently under the notice of our readers. We may add that in our April number we figured a variety of Heath called Spenceri; this, as will be seen by referring to our plate for that month, is quite different from the one now described, which, for the sake of distinction, has been named Spenceriana. As regards sale, &c., full particulars will be found in our Advertiser.

NOTICES OF PLACES.

MR. RIVERS' NURSERY, SAWBRIDGEWORTH.

THIS nursery, which has long enjoyed wide notoriety for fruit trees, Roses, and latterly for Mr. Rivers' experiments with orchard houses and fruit trees in pots, has been in the possession of Mr. Rivers' family for upwards of a century, and comprises quite 100 acres. Fruit trees and Roses occupy a great extent of ground; besides an extensive home trade in these articles, as well as in general nursery stock, Mr. Rivers has a large export trade with America and the continent. As our chief object, however, in visiting Sawbridgeworth was to examine the orchard houses, our attention was principally directed to that department.

The cultivation of fruit trees in pots dates back but a short period, and has grown up, as it were, from our unfavourable springs of late having rendered out-door crops of wall fruit very precarious. But unquestionably the great impulse given to the erection of glass buildings of this description must be attributed to the removal of the duty on glass, which enables this useful article now to be purchased at a cheap rate. To this wise policy, therefore, we owe the employment of glass on so great a scale in gardens, as well as to its entering largely into the construction of public and private buildings. We have at all times

strenuously urged that orchard houses are a valuable auxiliary even to good gardens, and in our opinion indispensable in exposed and cold situations. The cases of failure that we have heard of are very few, and can easily be traced to other causes than the faults of the house, while their success has now the test of experience to recommend them. We feel, therefore, some gratification in knowing that our estimate of their utility has been satisfactorily proved, and, further, that they are springing up in all directions, which can only arise from the fact that their merits are duly appreciated by lovers of fruit. We are not quite sure whether fruiting the trees in pots is the cheapest and best way to obtain permanent crops, but on this we reserve our remarks for the present. We must commence with plants in some shape or other, and Mr. Rivers and the few other nurserymen who have so kindly undertaken to supply our wants have really got these up so nicely to hand, such charming little compact bushes ready furnished with fruit buds, that no one can resist the temptation to purchase. Parties have now only to build their house, and despatch their order, and forthwith they can have these miniature trees all ready to hand, and fit for immediate work, and a short six months over may enjoy the fruits of their labour without having their hopes frustrated by inclement seasons or destroying blights. As nurserymen have so obligingly taken the trouble to get pot fruit trees ready for bearing fruit at once, why not attempt the same thing with trees for walls? How rarely do we see trained trees, excepting what have been cut back close home and presenting nothing but five or six strong shoots, which they tell us must be cut back again after planting. Why could not a part of their stock of trained trees have their shoots cut only half way back? With Pears, Plums and Cherries we should get a few spurs the second year, and with the Peach some smaller shoots, which, in all probability, would produce fruit buds. But, say they, if we did not sell them the first year they would be too large afterwards, and unsaleable. For our own part we should prefer them to trees closely cut back, and furnished only with young wood, and so, we believe, would most others. But, let us ask, does not the practice of cutting back strong vigorous young trees often produce gum and canker? We have seen Apricots, Cherries, and Peaches, too, become gummed and worthless through the severe pruning resorted to to procure handsome plants, *i. e.*, with long straight shoots, and which perhaps have even no leaf buds for one-half their length, in consequence of the gross habit induced by this system.

To return to our subject, for the above digression has no reference whatever to anything we saw at Sawbridgeworth,—the orchard houses here are of the usual form, most of them having an equal span roof. Some of those first built are merely glass roofs or sheds, the side plates supported by posts placed in the ground, the space between the side plate and ground being filled in by clipped hedges of Arbor-vitæ or Yew. Others, more recently put up, have the sides boarded up, and are furnished with shutters running their entire length to open for ventilation. The roofs are all fixed, but are provided with the means of allowing the heated air to escape from the apex, thus creating a current of air from the sides to the angle of the roof. A very good

idea of these houses is given by woodcuts in our volume for 1854, p. 55. They vary in length according to circumstances, and are from 16 to 20 feet wide; for particulars, however, we must refer our readers to a work Mr. Rivers has published, entitled "Orchard Houses."

The houses not furnished with boarded sides to close up during the early spring months are not so favourable for Peaches and Nectarines, but they answer very well for Apricots, Plums, Cherries, &c. The cold winds of March and April sweep through the side hedges rather too freely, and all attempts at husbanding the solar heat, so as to obtain a moderate warmth through the night, is lost. They were at first tried as an experiment, and so far answer for the fruits we have named, but for Peaches, Vines, &c., the sides must be boarded, and made, when closed up, pretty air tight. If necessary, the house can then be closed early enough in the afternoon, to retain a heat sufficient to keep the trees quite safe even during sharp frost. Our readers should bear this in mind when building these kinds of house. We cannot remember how many of these houses there are, as they are placed in different situations about the grounds, but they contain an immense stock of young trees of all kinds preparing for working next season, and which will be ready for purchasers in a short time.

Two or three of the houses are filled with young Vines; some are trained to single rods five or six feet long each, for fruiting in the usual way by training the shoot under the roof. Another lot are grown as bushes, merely by cutting down a last year's Vine in the winter to within four or five eyes of the pot, and allowing three or four shoots to grow, which are trained to sticks placed in the pot, and stopped when 18 or 20 inches long; in this way they form nice bushes, and when loaded with fruit have a novel appearance. Some of the prolific kinds bear fruiting shoots the first year; we noticed among others Precoce de Malingre, an early white Grape, and another called Muscat St. Laurent, said to be a very suitable Grape for the open air.

The crop of Peaches and Nectarines in the principal fruiting house was very good; many of the trees were quite loaded. The pots in which the trees grow are placed on a bed of soil, into which the roots penetrate; this, and the help given the roots within the pots by watering them with liquid manure, makes the fruit swell to a large size. The pots are lifted in the winter, and the roots which have found their way into the border carefully pruned in; a shovelful or two of fresh compost is then placed below the pot, to assist in feeding the plant the following season. By means of his orchard houses, Mr. Rivers is proving a number of continental and American Peaches, some of which are likely to turn out good varieties. Of comparatively new or scarce kinds we noticed Mignonne Tardive, a late Mignonne, very fine; Pêche à bec, a very fine early kind; Early Grosse Mignonne, a variety ripening fourteen days earlier than the common Mignonnes; Haines' Early Peach, good; Early York Peach, better known than the above, but valuable for its earliness; as is Scott's Early Red, a high flavoured American kind; Reine des Vergers, good; Brugnon monstreuse, very fine; Cooledge's Favourite, good; Monstreuse de Doué, fine; Rosanne Nouvelle, a very handsome Peach with yellow flesh, quality medium;

Desse Peach, a late kind; the true Bourdine Peach, very late; Belle de Doué appears a very useful kind. The Cherries, Plums, and Apricots had been taken out of the houses some time; most of them were plunged out in open quarters. There was a large quantity of Figs, comprising allthe best kinds in cultivation, preparing for fruiting in one or two of the houses.

The excellent order everything was in, and the admirable manner in which the fruit tree department is conducted, ensure sound and early productive trees.

The soil of the Sawbridgeworth Nursery is a loam, varying from a strong to a sandy nature, according to the character of the subsoil, which is in places clay alternating with beds of sand. These sand-beds have been quarried in places, and Mr. Rivers has taken advantage of these pits, and has converted them into a primitive kind of Grapery; to effect this, Vines have been planted on one side the margin of the pit in the natural soil of the nursery, a rough kind of framework is placed over the pit, on which are fixed glazed sashes, covering it over and resting on the opposite side. The Vines are brought in under the glass, and fruit freely—not large, of course, but well coloured. Some of these sand-pits are 10 or 12 yards long or more, three or four yards wide, and seven or eight feet deep. Nothing has been done to the interior, except making a rough path along the middle, ending with a seat at the further end. We had never before seen old quarries turned to so useful a purpose. Near one of these Graperies a larger sand-hollow has been converted into a place for plunging Vines in pots intended for planting out; the plants are five or six feet high, and at a distance reminded one of the sloping banks of Vines on the continent; but on a closer inspection they were of course minus the fruit.

We had only time to pay a very hasty visit to the Rose quarters, which, as our readers are aware, are very extensively stocked. We saw, however, that Lord Raglan, a new Hybrid Perpetual Rose, of a brilliant dark crimson and fine form, is decidedly one of, if not the very best Rose out; it was here blooming freely, and could be distinguished at a distance from others. Prince Leon, bright crimson, very good; Paul Dupuy, another beautiful Rose, was in great perfection; Emperor Napoleon and Deuil de Willermorz are most brilliant in colour, but are too deficient of petals in the centre to become first class Roses. We, however, had not time to go over the Roses as we could have wished, and must wait for another opportunity to do them justice.

SCOTTISH PANSY SOCIETY.

THE autumn meeting of this Society was held at Glasgow on the 10th of September, in connection with the exhibition of the Glasgow Horticultural Society; and although the season has been so wet and cold, there was a tolerable display of Pansies, but the blooms were not of the best quality.

In the Dealers' Class for 24 blooms, Messrs. Paton and Small, of

Glasgow, were first, with Duke of Perth, Alpheus, Nonpareil, Father Gavazzi, Bride (which is a very useful white ground seedling), Sovereign, Cyrus (fine), Miss Talbot, Royal Purple (a good useful light purple), Miss Walker (one of the best light grounds), J. B. Gough, Sir C. Napier, Sir Colin Campbell (one of the best and most useful white grounds), Yellow Climax, Lord John Russell, Black Douglas, Lord Palmerston, Jeannie (a very useful self), Charles Cowan, Monarch, Hebe, Royal Visit, Omar Pasha, and a seedling. The second prize was awarded to Messrs. White and Sinclair, of Paisley, in whose stand we noticed fine blooms of Rev. J. H. Gossett, Lord John Russell, Lord Palmerston, Sir E. Lyons (a fine white ground flower), Venus (a white self, of medium quality and good eye), Cyrus, Youell's Lady Jane (a yellow ground flower with broad purple belting). Hooper's Yellow Model was also shown in this stand, and is by far the best yellow self Pansy we have, possessing a dense even eye, which is well defined in the side petals. Messrs. Dickson and Co., of Edinburgh, were third, in their stand being blooms of their new ones—Countess of Roslin (white, with broad deep purple belting and dense eye, smooth and of good substance), and Col. Windham (white, with rich plum purple belting and dense eye, a fine variety). In this stand also were good flowers of Cyrus, Catharine Dundas (yellow ground with rich maroon belting, eye not solid, still a large and useful flower), Miss Nightingale, Sir Colin Campbell, and Memnon. Mr. Douglas, Edinburgh, was fourth.

In the Amateurs' Class for 12 blooms, Mr. W. Campbell, of Pollock, occupied his usual position as 1st; Mr. Wm. Thom, of Paisley, 2nd; Mr. Wm. Boyd, of Easterhill, 3rd; and Mr. James Gibson, of Cathcart, fourth.

18 Blooms:—1st, Mr. Robert Wardrop, of Cathcart; 2nd, Mr. James Gibson; 3rd, Mr. Wm. Boyd.

6 Blooms (Gardeners'):—1st, Mr. W. Wilson, of Cathcart; 2nd, Mr. W. Boyd.

6 Blooms (Amateurs):—1st, Mr. W. Wilson; 2nd, Mr. W. Thom; 3rd, Mr. M. Smith, of Kilmarnock.

Open Class, for 12 blooms:—1st, Mr. Robert Wardrop; 2nd, Messrs. White and Sinclair; 3rd, Mr. W. Thom.

The prize for the best self was awarded to Mr. W. Wilson, for Jeannie; for the best yellow ground, to Messrs. White and Sinclair, for Lord John Russell; for the best white ground, to Mr. W. Thom, for Royal Visit. The premier prize for the best Pansy in the exhibition was also awarded to Jeannie, exhibited by Mr. W. Wilson. Two or three other seedlings were exhibited, but none of any merit; one of these, however, a yellow seedling exhibited by Mr. Boyd, may prove a useful flower, but Yellow Model is greatly superior to it.

It seems now to have become a serious question with the Committee whether it is worth while continuing an autumn exhibition of this flower, and we believe it is now settled to hold a spring meeting alternately at Edinburgh and Glasgow, as well as an autumn meeting for seedlings only; thus, for the next year, the spring meeting at Edinburgh, and an autumn meeting for seedlings in Glasgow; and in 1858, *vice versa*.

There was very little in connection with the general exhibition calling for special notice. The usual amount of indifferent cultivation peculiar to country exhibitions seems to have been displayed, and very much has yet to be learned. There were some good plants from the Botanic Gardens, and from Messrs. Austin and M'Aslan's nursery, but the plants and flowers generally were of inferior quality. One feature, however, connected with the show, does command our notice. We allude to a silver cup offered by Messrs. Syme and Middlemas, of Glasgow, for 9 spikes of Hollyhocks, 12 Dahlias, and 12 Pansies. This was won by Mr. Wm. Gow, gardener to Robert Adie, Esq., of View Park, near Uddingstone, four others competing with him. So good a prize should have called forth better competition, but the bad season for Dahlias and Hollyhocks no doubt sadly interfered.

OPEN BRICK WALLS *V.* PROTECTION.

It appears from the opening of this case for the prosecution that plaintiff has occupied a very prominent position in connection with horticulture for some centuries in the British Isles, and having, with but few exceptions, performed the duties imposed upon him in a satisfactory and economical manner, would always have continued to do so without a murmur, had the same attention been paid to him as at the onset; but defendant, a mere youth, comparatively speaking, has of late years insinuated himself into the notice of many of our horticulturists under promises which certainly would sound very favourable, as they were to the effect that if they would but employ him (defendant) they would be sure of good crops, no matter how they planted their trees, only that their roots were somewhere in the ground; and no matter whether they attended to their borders, or thinning, stopping, or ripening the wood, or, in fact, their trees might be allowed to grow just as they pleased, but a good crop would infallibly be the result, if defendant were only employed in some one of his garbs; for be it understood, he assumes various aspects—sometimes he puts on a glass structure called an orchard-house; sometimes another called a glass wall; other dresses he calls "frigi-domo," nets, mats, canvas, fir branches, straw ropes, &c., &c. Now all these things tended to dampen and throw plaintiff very much into the shade, and he feared in a very short time into oblivion; but as he did not wish to take any undue advantage over defendant, it was decided to await patiently till the issue of some very unpropitious season should enable the latter to test his capabilities to the utmost, and as it is allowed by all that the spring of 1856 was an extraordinarily unpropitious one, plaintiff decided that the time was come for him to endeavour to vindicate his cause:—hence the present action.

Some discussion here arose as to whether the evidence could be admitted in the manner it was brought forward, viz., by circular letters distributed indiscriminately through the country, soliciting the required

information; but it being shown that witnesses coming from every quarter of the kingdom would be a heavy affair, and that to send a person through the country would be open to objection on the score of partiality, therefore it was ultimately agreed that the evidence as brought forward would be admissible, if duly attested, and bearing the post-mark of the several localities from which they came.

The following witnesses were called to support the prosecution:—

Mr. Busby, Stockwood Park, Luton, Beds., stated that his crops of Peaches, Nectarines, and Plums were very fine indeed; that he had not allowed defendant's entrance into his grounds for these ten years; that he had never failed to have a crop when many of his neighbours, who had employed the defendant, had repeatedly failed. Witness stated that he had always used broad coping to his walls, that his borders were well drained, and that he paid great attention to the summer treatment of his trees; also, that throughout his general observations he had seen equally good crops upon trees fully exposed as upon those protected. This witness also further stated that if the trees were not too deeply planted, and not overcrowded with wood, the spring thinning began in time, gradually thinning through the summer, and stopped towards the middle of August, good crops, he would venture to say, would be the result.

Mr. H. Dowling, Woolstan Lawn, Southampton, deposed that fruit was very thin in his neighbourhood; that in most places they use protection, but there are better crops where the trees were not covered; that he is sorry to see such neglect in that most essential point, draining the borders, and that he has generally seen better crops upon unprotected trees than upon those protected; he also stated that with good coping and well-drained borders, he is confident of better crops and trees in better health and vigour.

Mr. Abbott, Westwood, Lancashire, stated that the crops were very bad in his neighbourhood; that he covered his Peaches and Nectarines with canvas upon poles, but got no fruit—Apricots without protection, good crops; his borders are thoroughly drained; that he has generally seen the best crops upon trees fully exposed, and his opinion upon the whole is, that covering is a very useless and expensive affair.

Mr. Don, Knole Park, Sevenoaks, deposed that the crops round him were generally as bad as could be; that the defendant was employed in a great many cases in the form of cotton and woollen netting; that the borders are not generally drained; but, nevertheless, he has generally seen better crops without covering than with it; when he lived in Suffolk they never covered, and he never remembered a failure. He also remembered in his young time full crops of wall fruit upon the open walls in Scotland, Apricots especially.

Mr. George Hood, Mamhead Park, Exeter, was the next witness, who stated that crops of wall fruit were very poor in his neighbourhood; that defendant was denied entrance to his place, but his borders wanted draining, and that he had generally seen better crops upon unprotected than protected trees.

Mr. Carpenter, Great Barr Hall, Birmingham, next deposed that Peaches and Nectarines were bad crops in his locality; Plums, Apricots,

and Cherries average; Apples and Pears very thin—some trees were covered and some were not. Haythorn's hexagon netting was used, but he has observed this season better crops upon those trees that were fully exposed than upon those covered.

Mr. George Sclater, Stackpole Court, Pembroke, was here called, and he stated that the crops of wall fruit in his neighbourhood were very bad indeed, and he might say the same of all out-door fruits. The only protection he uses are ten-inch coping-boards; his walls are very much exposed to the south-west winds direct from the Bristol Channel, and he finds the coping-boards very beneficial when the trees are in full bloom, and afterwards laid aside; his borders he well drains, and he finds where this is attended to, with judicious summer treatment, that he gets equally good crops upon the unprotected as upon the protected trees, and, this season, those trees which were fully exposed are by far the best.

Mr. E. Durrant, Bushall Park, Saxmundham, Suffolk, stated that the crops of fruit were very thin in his locality. Some portion of his trees he covered, and some he did not, but has quite as many where he did not cover. He has paid great attention to drainage these last few years, and thinks when this is not attended to a slight covering is necessary.

Mr. Stevens, Malvern Hall, Solihull, Warwickshire, has not employed defendant these four years: his crops of Peaches and Nectarines, Pears and Plums were never more abundant, and his crop of Apricots an average one. He used formerly to employ defendant in the shape of inch netting doubled and hung from the coping over the trees, but he looks at protection now as an *unnecessary addition to garden expenditure*. He also stated that the general crops in his neighbourhood were very thin indeed, but very little attention was paid to their cultivation on scientific principles. This witness also stated that he had care of the wall fruit department in the gardens of the Horticultural Society at Chiswick, under Mr. Thompson, some few years since; there they never used protection for many of the Peaches and Nectarines, excepting nine-inch coping-boards, and always had good crops.

Mr. James Kitley, Lyncomb Vale, Bath, next deposed to the crops being very thin in his neighbourhood; he has a quarter of a mile of wall, and being immediately upon the freestone requires no drainage. Witness never uses protection; he finds that he loses more than he gains by it; it is but seldom he fails in having a crop.

Mr. J. Stevenson, Lambton Castle, Durham, here stated that the crops were a complete failure in his locality; that he never covers, and seldom fails to get a crop; he attributed his failure to the want of sun last autumn to ripen the wood; as a general rule, has better crops without than with covering.

T. W. Abbott, Ribston, upon being called, stated that he had good crops upon all his walls; Apricots upon a west wall set their fruit like ropes of onions; that defendant never enters his doors—he knows him well, but can do without him; he never fails to have a crop. He also stated that his father, for fifty years, never admitted defendant to his presence, and that his crops of wall fruit were yearly the admiration of the whole

county of Suffolk, in which he resided, but judicious summer thinning was always attended to.

Mr. George M'Ewen, late of Arundel, but now of Bretton Hall, was here ushered into the witness-box amid plaudits. He stated that many years ago he came to the conclusion that, with well-drained borders and thorough ripening of the wood, spring coverings, as generally practised, were unnecessary. He also stated that he highly approved of temporary coping, put on just as the blossoms begin to expand, and removed when the fruit is fairly set. He further stated that, notwithstanding these views, he could conceive conditions in which it might be commendable to protect; but not as a general rule.

At this stage of the proceedings an adjournment was asked for and granted, in consequence of several of the witnesses not being forthcoming; therefore we must defer till our next the continuation of this important case.

THOMAS W. ABBOTT.

Ribston Park, Wetherby.

STRAWBERRY PLANTING.

I SEND you a few hints on preparing ground, and planting this useful fruit, for insertion in your periodical.

Choice of soil: a deep soft, unctuous loam is the best; next, a clayey or marly loam, if not too heavy; lastly, sandy loam; but avoid dry sandy soil, or very shallow soils on gravel, unless you have great command of water. Clayey soils should be mixed with road scrapings, leaf soil, or any porous material, in addition to the dung prescribed.

Trench the ground, whatever it may be, two feet deep, if you can—if not, eighteen inches. Do not throw up to the surface, however, the subsoil, if raw and clayey, but fork it up and allow it to lie at the bottom; mix thoroughly the soil, as the trenching proceeds, a good dressing of rotten dung, using more of it where the soil is light, for which cow and pig dung are preferable. When the trenching is done level the surface, and fork in a few inches deep some very rotten leaf soil or manure. All is now ready for the plants: to prepare these we must go back to the end of June, when the runners first push. Mix up a few barrowfuls of rich light soil; take a trowel, and with it remove a good handful of soil whereabouts the runners can be laid; fill up the hole with the compost, and in it place the young plant, making it firm, and see that future growths from it are duly pinched back, water occasionally when dry, and in three weeks you will have fine healthy plants with a good handful of roots, ready to take into the new soil when planted. Nearly all our great men recommend layering Strawberries in pots, both for forcing and planting out. This takes up a deal of time, the plants are difficult to secure properly in the pots, and they require close watching to keep them moist in dry weather; and, lastly, if not taken off directly, the roots reach the sides of the pots, they get matted, and do not progress so satisfactorily afterwards; whereas, by simply

layering them as above they are very easily managed, and would grow on without injury for a considerable time, if they cannot be removed. Be assured, you will get much better plants, and at less than half the trouble, by this plan.

Planting:—Large growing sorts, as the Victoria, Queen, Sir Harry, &c., should have the rows three feet apart, and the plants two feet from plant to plant; but for common produce eighteen inches will be sufficient. Short-topped kinds may be two feet six inches apart, row from row, and rather closer in the row; water occasionally, pinch off all runners as they appear through the autumn: these will bear well the following season. The crop will last in perfection from three to six or seven years, according to the nature of the soil and management, which I will notice hereafter.

J. Mc D.

DESCRIPTIVE LIST OF HARDY CONIFERS, No. XX.

PINUS LAMBERTIANA:

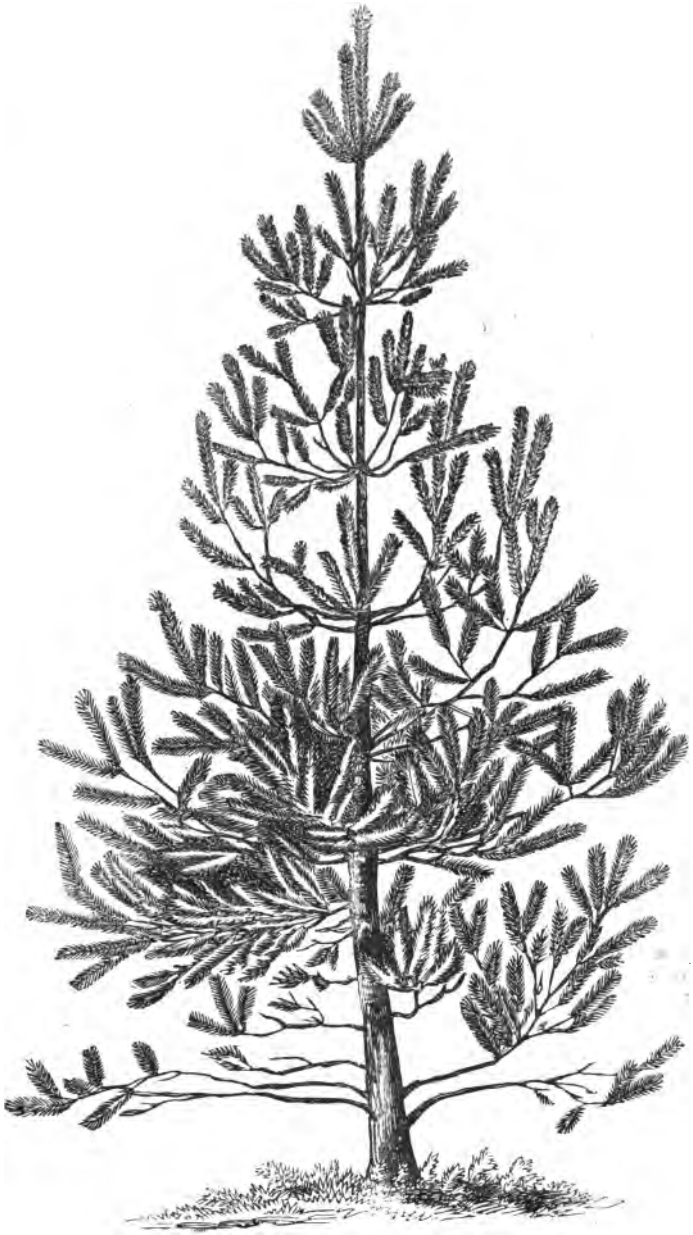
THE GIGANTIC OR LAMBERT'S PINE.

We again resume our notice of this important family of plants by giving a wood engraving of Lambert's Pine, taken from a tree growing in the Pinetum at Nuneham Park, near Oxford.

Pinus Lambertiana belongs to the Strobus or Weymouth Pine section of the five-leaved Pinuses, and which contains, besides the subject of our present notice, P. excelsa, from the Himalayas, P. ayacahuite, monticola, and the Weymouth Pine, from North America. They are noticeable for having silvery grey leaves, rather drooping, and for their rapidity of growth and large size.

This noble Pine was discovered by Douglas in 1825, when at the head waters of the Multnoman river. This enterprising traveller again met with it in 1826, "beyond a range of mountains running in a south-west direction from the Rocky Mountains towards the sea, and terminating at the Cape Orford of Vancouver. It grows sparingly upon low hills and undulating country east of the range of mountains just mentioned, where the soil consists entirely of pure sand, and in appearance is incapable of supporting vegetation; here it attains its greatest size, and perfects its fruit in great abundance." Douglas further states that P. Lambertiana does not form dense forests, like most of the other kinds which clothe the face of North America; but, like P. resinosa, which grows among them, they are scattered singly over the plains. Its geographical limits appear to be from 40° to 45° N. lat.

Lambert's Pine attains the largest dimensions of any of the true Pines. According to Douglas, it grows from 160 feet to upwards of 200 feet in height, varying from 20 feet to 60 feet in circumference, One that he measured which had been blown down by the wind, was 215 feet in length; its circumference, at three feet from the ground, 57 feet 9 inches; at 134 feet from the ground, 17 feet 5 inches; and this was not one of the largest trees he saw. The trunk is unusually straight, and



PINUS LAMBERTIANA.

destitute of branches for about two-thirds of its height; the bark is smooth, of a light brown colour; leaves in fives, of a bright silvery green, much resembling the Weymouth Pine; the cones are at first upright, but in the second year, when they have acquired their full growth, they are pendulous, and from 16 to 18 inches in length.

Many of the earliest specimens planted in this country are dead, or we should by this time have had to record some large trees. Many others have been grafted on the Weymouth Pine; and whether from this cause or some peculiarity about the plant, we frequently find specimens not growing with that freedom we should expect. Our present illustration is, however, an exception; for in the deep loamy soil of the Pinetum at Nuneham, it was growing freely, and was in vigorous health. Planted in October, 1846, it is now above 20 feet high and of proportionate breadth, and in all probability will make a noble tree. On account of the peculiarity about this plant noticed above, we do not recommend its being too extensively planted, unless good seedling plants can be obtained, when its gigantic size and upright growth should secure it a place, where its imposing appearance, as it grows up to a tree, could be seen to advantage.

NOTES ON NOVELTIES IN ROSES.

THE list which appeared in your last Number, not professing to be complete, or very explanatory, the following account of the characteristics which most of the kinds possess, with some few additions, has been derived from a close examination of them on a somewhat cold, heavy soil.

Of the more recent introductions, Lord Raglan is undoubtedly the gem, and is certainly worthy of the highly complimentary name given to it, being of beautiful shape, excellent habit, a sparkling scarlet-crimson centre, thrown out by the lower petals being shaded with black or very dark purple; one of its best recommendations is the stoutness of its petals. Of the same warlike group, and for those whose taste prefers a thinner, and by some said to be the more "picturesque" style, Emperor Napoleon will be admired; the colour, a brilliant crimson, is very striking; while the neat, prettily-shaped pink flowers of Madame Place will recommend it especially for bouquets. Madame Masson, very double, large size, and rich crimson colour, makes it a desirable variety for exhibition; Gloire de France is much of the same, though somewhat darker colour, and shape, but not so large or generally good as Prince Leon. That good old Rose, Baronne Prevost, will, it is feared, be superseded at last, as between Madame Domage and Barron Larray, it is, it is feared, thrown in the shade by their similarity in style; but Duil de F. Willermorz and Prince de la Moskowa are much of the same character, and both very interesting for their intensely dark velvety crimson petals, that shade having been much wanted; but as they are but little more than semi-double, we may reasonably anticipate a new race in colour of Hybrid Perpetuals equalling the darkest Bourbon. Victor Trouillard is, we believe, an approach to it, but not quite enough

of "The Nigger." Of the recently introduced light coloured Roses, to Madame Vidot and Belle Lyonnaise is here given the preference, and Duchesse de Cambaceres is generally admired as a noble flower, colour bright rose, and does not belie its title as a Perpetual. We are much pleased at the novel colour and style of Souvenir du Petit Corporal—the outer petals being pale lilac rose shading to a bright crimson centre, and it was hoped that a confident opinion could have been given of the new striped Hybrid Perpetual Madame D. Giraud; but rather than mislead, should you not in the meantime receive a description of it, I have no doubt of being enabled to do so in your next. The high character given to General Jacqueminot has disappointed some growers, from its fault of not being fully double being omitted in its description in most of the catalogues; its glowing colour, however, makes it really a glorious flower. Although not now coming properly within the description of a new Rose, it is mentioned to give it a general recommendation to all who have not added it to their collections, it having won golden opinions for habit, colour, and shape, and is best described, with but little exaggeration, as "a Perpetual Brennus."

Recent additions to the Bourbons are very few, but we can safely recommend amongst those called "new," Reveil as a finely shaped, full sized, free blooming variety, of the richest purple colour and of good habit; and Souvenir de l'Arquebuse, of deep but brilliant crimson, not desirable for its shape, but for profuse flowering and strikingly effective colour. It is very gratifying that the Perpetual Moss Roses have lately been receiving some really excellent additions. Salet is the nearest approach to the old Moss, and really an autumnal bloomer. Madame Ory and Maria de Bourg are not of equally robust habit, but still very desirable, as they give their flowers so late as to be great acquisitions.

Many novelties in summer Moss Roses have been received, but as they require a season or two longer to prove than Perpetuals, I hope to speak more confidently of them another year.

C. G. WILKINSON.

Western Rosery, Ealing.

VINES AND VINE BORDERS.

GRAPE growers have lately been informed of facts which, as our neighbours say, have created a sensation. The Editor of the *Gardeners' Chronicle* informs his readers, that to make a fuss about the soil of Vine borders, or to build costly houses for their growth, is useless; for that this present season very first-rate Grapes have been grown near London, in the one instance without any prepared border —and in the next under such conditions that the generality of gardeners would pronounce impossible. Let me, however, give the editor's own description more at length. In the first place we are informed, at page 499, that under a glass shed (*sic*) in the nursery of Mr. Glen-

dinning, of Chiswick, Grapes have been produced this season which at the last Park Show beat the entire field of Grape growers in open competition, and carried away the premier medal from such men as Fleming, Tillyard, Henderson, Turnbull, Davis, &c.; and no small victory, sure, when we consider that the Vines producing such wonderful results are growing in the natural soil of Mr. Glendinning's nursery, which forms the floor of the shed (house), the Vines having been planted against the back wall against which they are trained, and for a short distance down each rafter. The only object in planting them at all appears merely to furnish eyes for propagating from: the house, we may apprise our readers, is devoted to growing Vines for sale. We are next introduced, at page 547, to another Vinery (also near London), or what must be, from the description given of it, a very sorry substitute for one—the roof supported by fir poles to prevent its tumbling down altogether. In fact, the gardener, we are told, has some trouble to keep this crazy edifice together; while the chinks and fissures in the roof, one would suppose, are sufficient to prevent his feeling any great anxiety about ventilation, even during such weather as we have lately experienced. As a kind of set-off to the roof, we are informed the heating apparatus was good, and I should suppose there is plenty for it to do in frosty weather—but how about rain? During a shower the scene inside would remind us of Shelley's lines, where he says:—

> "Then the rain came down, and the broken stalks
> Were bent and tangled across the walks;
> And the leafless net-work of parasite bowers
> Massed into ruin, and all sweet flowers,"

did not the editor inform us to the contrary, for he gives us a glowing description of the plants he found—Scitaminæ, Orchids, Ferns, and Mosses, luxuriant with health and verdure in the damp atmosphere inside. Well, what will your readers say to the above as suitable quarters for the Vine? Why, to sum up, instead of bunches with half their berries shanked or shrivelled, and the remainder (supposing them Hamburghs), representing the genuine *red* variety of that good old Grape (which, somehow or other, always seems as if it had the misfortune to be planted in dark damp houses), we are informed they were even better than Glendinning's, and would have beaten them if exhibited at the same time; we must therefore conclude they were as near perfection as could be wished! These, too, are growing inside the house; but whether in a prepared border or not we forget. The talented editor of the *Gardeners' Chronicle* sums up with an aphorism which all must admit to be true, that "He is the best cultivator who can produce the most with the smallest means." But as in the cases alluded to it has a doubtful bearing, inasmuch as casual success cannot be placed against favourable results extending over a number of years, even if obtained, as in the instances alluded to, with little trouble and small means. I am no advocate for trusting to chance in these matters, nor yet for allowing good Grapes to be spoiled through neglecting common repairs; and, as an illustration of Grape growing carried out on directly opposite principles, I beg to introduce the readers

of the *Florist* to a worthy gentleman, Mr. Jonas Nash, of Bishop's Stortford, in Essex, who, besides having an extensive business as a maltster and brewer, possesses also the very best vineries in the kingdom. Now, when Mr. Nash commenced Grape growing, he determined, very wisely, as a man of business, to do the thing well. He did not plant his Vines in the natural soil of his garden—not a very unsuitable one either—and he has found it to be sound economy to keep his glass and wood-work in good repair; and though his border must have cost a good round sum, in addition to about as substantial well-built Vineries as I ever saw, I venture to say the produce has long since squared off the capital account, and returned a large annual profit into the bargain;—I speak of the market value of the crops without knowing how Mr. Nash—who is a private gentleman—disposes of his fruit.

The site for building the Vineries was a sloping bank in Mr. Nash's garden, the subsoil of which is gravel; the principal range is 120 feet in length, in two divisions, one half being planted with Muscats, and the other with the Hamburgh: there is, besides, a separate house, planted with the Common Hall Muscat. The Vineries are of the common lean-to description, loftier than we usually see them, and provided with front sashes for ventilation. The roof sashes are glazed with good sheet glass. As the ground slopes away from the front of the houses, the border has the advantage of being almost wholly above the garden level; and notwithstanding the bed of gravel below, Mr. Nash concreted the surface, to prevent any chance of the roots passing downwards, and the sharp pitch of the ground quickly carries away any water which may percolate through the border. Judging by the retaining walls built at each end of the border to keep up the soil, I should say they are nearly four feet deep at the front of the house, and perhaps thirty feet wide; the depth at the front is, if I recollect rightly, two feet, but as the general level slopes rapidly the border has a good pitch. Mr. Nash informed me the houses were built thirteen or fourteen years since (I forget which); the border was made of turfy loam, old plaster, refuse skin, hair, and dressings from a tan-yard, and lastly one hundred tons (!!!) of rotten London manure were added, the whole well mixed together. Hear this, you who advocate maiden loam and shallow borders, and who are afraid lest a little carrion or an over-dose of manure should spoil the flavour of your Grapes and make your Vines grow too gross. Why in this respect Mr. Nash's Vines, when pruned, are more like the limb of a good-sized tree than the walking-stick proportions of the ill-fed and of course weakly-constitutioned Vines so often seen. The real case before us, proved to demonstration, is, that to grow the Vine to its highest perfection a large amount of enriching food must be placed in a favourable condition for the Vine roots to pasture in; and that provided the border is well exposed, drained, and elevated, and its component parts made sufficiently porous for the rain falling on it to pass quickly through, it can scarcely be made too rich. As for such borders becoming sour, pasty, and choked up in the course of time, I do not believe in it if properly put together; at least, here twelve years have passed away, with the Vines as vigorous as ever, and I heard that when watered the water passes as quickly away as when the border was first made. Mr.

Nash informed me that the Vines had been allowed to carry such enormous crops that he feared he might overdo them, and this season he gave the borders the benefit of a ton of "blood manure," spread over the surface, in addition to a good dressing of dung, which is given them each spring: on examining the Vines where this dressing happened to be spread thickest, the Grapes were certainly finer than elsewhere, a fact which proves this kind of manure affords them additional support. The Vines are trained up the centre of each light, and are closely spurred in; and where a Vine has been trained with two stems, up separate sashes, instead of one, I saw no difference in the quantity or quality of the fruit. The Hamburghs, when I saw them a fortnight since, were ripe; the Muscats will ripen towards the end of this month (September). The crop was remarkably regular all over the house; the bunches very uniform in size, with the berries well swelled and beautifully coloured; upwards of half a hundredweight may be allowed for each stem—they have carried considerably more. The Muscats were equally regular with the Hamburghs, and were bearing the same large crops of splendid fruit; altogether, they are the best Vines I ever witnessed.

We see then, by the above fact, that Vines will amply repay a very liberal outlay, both in the construction of the house and materials for the border. I imagine that when rich borders so often fail in producing for any length of time fine Grapes, the cause must be looked for in the position of the border, or the want of sufficient porous materials in it to keep it open. I see no reason why Mr. Nash's Vines should not for years to come keep up their reputation, and they afford to the Grape grower—whether for private families or the market—an unmistakeable proof of what the Vine is capable of doing under good management.

Mr. Editor, I must now leave the question—how best to secure and retain first-rate Grapes—for the consideration of your readers. Gardeners have difficulty enough, I know, in obtaining the means for doing these kinds of things as they could wish, and need not a false economy brought forward to make matters worse; for this reason I have trespassed so largely on your space, to bring forward a case in Grape-growing obtained by following a widely different plan to the cases alluded to by the editor of the *Chronicle*, and now leave your readers to think and judge for themselves which to adopt.

G. F.

SELECT LIST OF PINES AND FIRS SUITABLE FOR PARKS AND WOODLAND SCENERY.

Abies pichta grows much in the way of a compact Spruce Fir, but with very dense foliage of a dead green. This is a very distinct Fir, and perfectly hardy.

A. Nordmanniana.—A very noble tree, belonging to the Silver Fir section; branches in whorls, thickly clothed with leaves of a dark glossy green; quite hardy, and a fast grower.

A. excelsa nigra.—A very fine looking dark variety of the common Spruce.

A. Pumilio.—This dwarf growing Pine is invaluable for planting for cover, or for clothing the steep face of hills or rocky ground. It grows more than six or eight feet high, and spreads itself for a considerable distance. This Pine is not known or planted near so much as it should be. At high elevations on the Alps and Pyrenees it covers miles of the mountain sides, and might occupy many similar places in Britain where hardly anything else will grow.

Pinus austriaca.—One of the handsomest of European Pines; grows very compactly, with foliage of a very dark green; when old forms a very picturesque tree. Is the Black Pine of the Hartz forests in Germany, now to be had very cheap, and deserves to be extensively planted; it forms a capital tree for sheltering game.

P. Pallassiana.—Nearly allied to the above, grows rather looser; becomes a fine tree.

Pinus Laricio.—A very fast growing tree, with rather curiously twisted leaves. For shutting out offensive objects, or situations where a quick growth is required, this tree is a very useful one, as well as for introducing among slower growers to produce effect.

P. macrocarpa.—A very free growing, bold, distinct Pine, excellent for groups or as single specimens in parks, &c. It produces cones of immense size, and is quite hardy.

P. ponderosa.—Something like the above, but loses its leaves on shoots more than two years old; this gives a tufted appearance to the tree, but it merits a trial for its singular appearance.

Pinus Sabiniana.—Much like macrocarpa in form and growth, but has leaves of a glaucous green, and bark of a silver grey. These three are fine picturesque trees for parks.

P. pyrenaica (hispanica).—A beautiful Pine of the Pinaster section; it grows freely, and forms a very handsome tree, with rather pale green leaves, and the young wood of a deep orange or reddish brown colour; by this it is easily distinguished even at a distance. This Pine produces good timber, and should be widely planted for its ornamental appearance.

Pinus radiata.—Closely allied to the beautiful P. insignis, of which it may be said to be the hardy variety. Besides this valuable property it grows more tree-like, with a straight bole and fewer side branches; it has leaves of the same intense green as insignis. As this has proved itself perfectly hardy, it should be substituted for insignis wherever that is found tender. I have radiata growing most freely and without having a leaf injured where insignis has been killed to the ground. It cannot be too well known or widely planted.

Pinus Lindleyana.—A very hardy and ornamental Pine; grows freely in any situation; leaves a dull green, and the bark of the young wood a rich brown colour. Worthy of extensive planting as a valuable and hardy tree.

P. Benthamiana.—A truly noble looking Pine, with strong robust shoots and leaves; a grand tree for the park. Young plants are now getting more plentiful, and should be made the most of.

P. Montezeumæ.—This is a Mexican Pine of very ornamental appearance; it resembles P. Lindleyana, but has longer leaves than that Pine.

P. muricata.—A hardy Mexican Pine; when young it grows too much in the shape of a bush, but is said to lose this habit in time, and become a fine tree.

P. tuberculata.—This is a very ornamental and fast growing Pine. I have trees 20 feet high planted in 1850. It is hardy and well worth planting on a large scale.

Pinus excelsa.—From the Himalayas; should be introduced largely into park scenery for its rapid growth and beautiful silvery foliage.

Cryptomeria japonica.—A species of Coniferæ from China; forms a graceful growing tree, with small elegant foliage; very hardy, and grows freely.

Cupressus Lambertiana and macrocarpa.—These, though chiefly adapted for lawns, are no less appropriate for the park, where evergreen fastigiate trees are much wanted; very rapid growers, with bright green foliage. They stand at the very top of the list as ornamental trees, and should be planted accordingly.

The following are suitable for low damp situations:

Abies canadensis (the Hemlock Spruce).—This is one of the most graceful and ornamental of the Fir tribe, and is valuable for massing, but more so for single specimens or detached groups.

Abies Menziesi.—A very ornamental tree for a damp situation. It has leaves of a bright glaucous green, which distinguishes it at a distance.

Taxodium distichum (deciduous Cypress).—A very suitable tree for low swampy situations or near water; it will, however, thrive on dry soils. It has delicate feather-like foliage, beautiful in summer, and changing to a dull red or brown colour in the autumn.

The following are dwarfer growing than the above, and are more suitable for lawns:—

Abies Pinsapo.—A very compact and ornamental tree, perhaps more so than any other species.

A. orientalis.—An elegant variety, allied to the common Spruce.

Abies excelsa compacta, elegans, and nana are very dwarf varieties of the Spruce Fir. Well adapted for parterres or small lawns.

Pinus sylvestris pygmæa.—A dwarf Scotch Fir; very ornamental.

Pinus Laricio pygmæa—ditto of the Corsican Fir,—and has the advantage of having leaves sometimes of a rich gold colour, making it a very ornamental dwarf plant.

PINUS.

[We can confidently recommend the above list to those of our readers who are looking out for good hardy Conifers, as it really contains all those that are worth growing, excepting Douglasi, nobilis, grandis, &c., and a few untried ones. We expect our correspondent has omitted the above as not being exactly cheap enough for planting extensively as park trees. Those he names we have ourselves proved to be thoroughly hardy, and parties wishing to improve their park scenery will not, we are sure, be disappointed in taking his descriptions as their guide.—ED. FLORIST.]

NATIONAL FLORICULTURAL SOCIETY.

Aug. 21.—Mr. E. Spary in the chair. First-class Certificate to Fancy Dahlia Carnation. Form and general outline good; petals smooth and stout; colour, white ground with narrow stripes of purple; a fine exhibition variety and highly commendable for its purity of colour. From Mr. J. Keynes, Salisbury.—First-class Certificate to Fancy Dahlia Conqueror. Form and outline good; stout; colour reddish blush ground, striped and spotted with dark purplish crimson. From Mr. J. Keynes, Salisbury.—Certificate of Merit to Fancy Dahlia Charles Perry. Form medium; size large, with good compact centre; colour reddish rosy ground flaked and striped with crimson; a showy variety. From Mr. J. Keynes, Salisbury.—Certificate of Merit to Fancy Dahlia Tam o'Shanter. Form of petal, outline, and centre each good; colour blush purple ground, striped purplish crimson. From Mr. Dodds, Salisbury.—Label of Commendation to Scarlet Pelargonium Kentish Hero. Habit dwarf, with average truss, flowers of medium form, colour bright orange scarlet with small white centre. From Mr. S. Johnson, Dover.

Sept. 4.—G. Holmes, Esq., in the chair. First-class Certificate to Verbena Magnet. Truss of medium size, with a fair average number of pips, which are of good form and of stout substance; colour rosy carmine of a new shade. From Mr. Weatherill, Hornsey-road.—First class Certificate to Dahlia Lady Popham. Form good, size medium, and for a light flower very stout; colour blush white ground, with very slight purple tip; a decided advance in the light flower class. From Mr. C. Turner, Slough.—First class Certificate to Dahlia Royal Scarlet. Form good, size full, substance stout, colour bright crimson scarlet; a flower with great depth, good centre, and smooth petals. From Mr. Keynes, Salisbury.—Certificate of Merit to Dahlia Duke of Devonshire. Form good, size full, substance average, colour rosy lilac shading to white at base of petal; arrangement of petal, depth and outline quite first-rate, wanting solidity and finish at centre. From Mr. W. Dodds, Salisbury. The following were also exhibited:—Dahlias: Lord Cardigan, of average size and full outline; colour dull red. Margaret, above medium size and tolerably well formed, with cupped incurved florets, but the eye sunk; coppery yellow, from the eye being suffused with red, the latter colour more evident at the back, the whole strongly flaked, streaked, and mottled with crimson. Edward, a large flower, but flat on the face. Rowland, exceedingly gay, rather below medium size, with finely cupped and well arranged petals, white heavily tipped with bright rosy purple. Duchess of Beaufort, a good light flower, scarcely of medium size; outline and petals good; blush white with tips of dense purple. Fenella, a pretty light variety; size medium, compact, well formed, and cupped; blush white tipped with purple, which is faint and mottley, producing the appearance of lilac tips. Alliance, a dark Carnation-striped variety; medium size and average form: ground colour white, suffused with purple crimson, marked with broad flakes and narrower stripes and specks of dark purple crimson,

or pale maroon. Harbinger, showy, medium size, outline full, petals cupped, colour rich deep scarlet. Saturn, a medium sized flower, with cupped florets; bright yellow, with faint coppery tips. Lady Franklin, one of a series of dull red flowers, the red in this case passing off into buff, below medium size, close and well filled centre.

Sept. 18.—G. Holmes, Esq., in the chair. This was the best attended meeting of the season, there being but a few less than one hundred entries of seedlings and collections. Messrs. Paul & Son, of Cheshunt, received a First-class Certificate for a fine white Hollyhock, of great purity, named Queen of Whites; it is a very fine variety. As was to be expected, Dahlias formed by far the greatest and principal attraction. These were brought from all parts of the kingdom, and generally in excellent condition. Lady Popham, a fine light kind; Royal Scarlet, a full sized heavy scarlet, of good form; Duke of Devonshire, mottled lilac, white at the base—it has a small petal; Conqueror, a dark striped fancy variety, of fine form; Charles Perry, an excellent shaped flower, of the same class, frequently throwing fine dark self flowers; and Tam O'Shanter, another striped fancy kind. These were either successfully exhibited on the 21st August or the 4th of September, and shown again good on the present occasion, but no awards could be made. George Holmes, Esq., of Norwich, received a First-class Certificate for a novel buff Dahlia named Cherub; this is a beautifully shaped flower, of fine substance, of a peculiar light clear shade of buff. The same award was given to the Rev. C. Fellowes, for Marion, white ground, edged and tipped with purple; this flower has a close, well made centre, and is of great depth. Mr. Dodds, of Salisbury, also received a First-class Certificate for Lady Paxton, a fancy variety of very good form, and general good quality; colour red, tipped with white. A Certificate was awarded to a pinkish lilac Dahlia, named Mrs. Edwards, a neat, small flower. Mr. Salter, of Hammersmith, received a Certificate for a well made fancy variety, which is handsomely and regularly striped, named Cleopatra. Mr. Barnes, of Stowmarket, sent Symmetry, Ophir, Minnie, and Indisputable, but neither flower was in good condition, and not good in the state shown. Mr. Legge, of Edmonton, sent several blooms each of Fancy King, buff tipped with white, and Mrs. Legge, yellow edged with red; these have been exhibited much finer earlier in the season. The same exhibitor sent Delicata, which is a bad Reginald. Mr. Rawlings received a Certificate of Merit for Mrs. Critchett, a flower resembling Lollipop, both in build and colour, but it is not so deep or good, yet a useful variety. Touchstone (Fellowes) a greatly improved Mr. Seldon, having a fine broad petal, with close centre; and Midnight (Fellowes), dark maroon shaded with purple, are fine flowers. Mr. Fellowes also sent Mont Blanc, a promising white; and Cavalier, a red flower, of fair form, but no novelty in colour. The Rev. Mr. Skynner, of Rushden, sent a boxful of blooms of a scarlet, named Cardinal, a bright promising flower, of average form and good centre. Mr. Grant, Shottesham Park Gardens, sent four blooms from the seedling plant of the best fancy Dahlia we have seen this season, and quite new in colour—bright scarlet tipped with white; it is named Frances. Mr. C. J.

Perry, of Birmingham, exhibited several kinds—the best were Samuel Brown, a lilac, and Samuel Moreton, a fancy. Four blooms of a good shaped crimson Dahlia were sent by Mr. Smith, of Birmingham, a flower of a shade deeper colour than Sir F. Bathurst, named John Stainton; this is a promising flower. Mr. Briggs, of Handsworth, sent several kinds, the best of which was a white named Miss Briggs. Mr. Dodds also sent a large white named Miss Dodds, and an excellent striped variety named Souter Johnny, deep lilac, striped with purple. Four seedling Hollyhocks were sent by Mr. Nicholson, of Bushy Grove; one of these, Beauty of the Grove, received a Certificate of Merit; and a First Class Certificate was awarded to Hollyhock Queen of Whites, a very fine white variety, larger than White Globe, and forming a close spike, exhibited by Messrs. Paul & Son. Mr. Geo. Smith sent Fuchsia Sanspareil, in bad condition: but from what we know of this flower, it will be an acquisition to the light varieties; and another light variety, Marchioness, colour of Queen of Hanover, but reflexes. A Certificate of Merit was awarded to a dark variety named Adonis, from the same grower. Certificates of Merit were awarded to Verbenas Brightonia, pale rose, good form and medium truss; and Mrs. Beecher Stowe, pale blush white with small carmine centre, medium truss, both from Mr. Weatherill, of Hornsey. Mr. Geo. Smith sent two seedling Verbenas—Cupid (Sankey's), rather lighter than Victory, with large yellow eye and good truss; and Venus, white with carmine centre and medium truss, both of which were awarded Certificates of Merit. Mr. Cole, of St. Alban's, sent two useful bedding Calceolarias, one of which, named rubra, is evidently a seedling between Prince of Orange and Beauty of Montreal, of a bright orange red colour, and a dense bloomer; and the other, St. Alban's Pet, is of Prince of Orange habit, very dwarf, and of a light orange red colour. Mr. Frewer, of Stowmarket, sent a showy variegated-leaved Petunia, of Prince Albert habit, but the flowers are of a lighter purple colour.

NEW PEAS.

Dickson's Favourite, you say, is "one of the very best second early Peas, producing an abundant crop of handsome well-filled pods, having from eight to ten Peas in a pod." My experience, and that of some of my neighbours, confirms this opinion. I have often seen as many as eleven Peas in a pod. With your permission, I beg to recommend a new Pea, sent to me this season for trial; it is called Veitch's Perfection New Marrow. The Peas are the largest I have ever seen; it has from eight to ten Peas in a pod. It is a strong, vigorous grower, from two to three feet high; as a summer Pea it is invaluable.

OLITER.

PLANTING OUT *V.* POT CULTURE.

THE planting-out of such plants as Chrysanthemums, Salvia fulgens, S. gesneriflora, and a few other soft-wooded plants, during the summer months, to be repotted in the autumn, has frequently been recommended as a means of saving a great amount of labour, and at the same time of obtaining better plants than by the more common practice of pot culture. That plants grow more luxuriantly when their roots are unrestrained by pots we have abundant proof. Take the Camellia for example. The difference between a pot and border plant, as they are generally met with, will, I think, be familiar to most people. I say, as they are generally met with, for it is well known that the Camellia is cultivated to great perfection as a pot plant; but I think it will be allowed that the healthy pot specimens of this plant are as rarely to be met with as are unhealthy ones when treated as border plants. Every one conversant with the cultivation of plants knows full well the unremitting attention requisite to bring the most common of our pot plants to perfection. With soft-wooded plants this is particularly the case. Take the Chrysanthemum for instance. To insure short-jointed growth, and a compact habit, so essential in first-class culture, the plants must be fully exposed to a great amount of solar light, and room for the air to circulate on every part of each plant. This being the case, a very rapid evaporation takes place, so much so that the pots, when full of roots, will require watering two or three times daily during hot dry weather, for if the plants are allowed to flag all hopes of producing first-rate specimens is at an end.

Now, in most gardens the requisite attention is not practicable; consequently, the plants, in most instances, lose the greater part of their foliage long before the time of flowering arrives. Under such circumstances I consider it infinitely preferable to plant out than to allow the plants to suffer in the manner described.

Such soft-wooded plants as it is intended to put out should be struck from cuttings early in the spring, and ready for planting as soon as all danger of frost is past. The ground on which they are to be planted should previously be well prepared by deep digging, and, if poor, manured. In planting such plants as the Chrysanthemum, a portion of fresh turfy loam should be placed for each plant; this will be of the greatest importance when the time of lifting arrives. Plants treated in this way will require comparatively little attention throughout the summer; a soaking of water occasionally during hot weather, and the growth regulated by stopping, will be nearly all the attention necessary.

About the first week in September is the best time to lift and pot the plants. Previous to doing this they should each be thoroughly soaked with water; if this is attended to, and the plants carefully potted, and placed in the shade of a north wall, and kept well watered at the root, and the foliage frequently sprinkled for a few days, they will in a short time commence growing without losing any of their foliage.

The list of names of such plants that have been treated in this manner is at present very limited, but I am confident that it might be practised

with a great variety of hard and soft-wooded plants. Young Heaths and Epacrises, if planted in properly prepared borders, will, in the course of a season, make growth with which pot plants would have no comparison.

O. P.

HORTICULTURAL SOCIETY.

ALTHOUGH the Society's house in Regent-street did not meet with a purchaser the other day, when put up to auction, we hear hopes are entertained that an opportunity of disposing of it by private treaty will offer itself before long. In the meantime, we understand that the Council are actively engaged in organising a system for the future management of the gardens, which in time will make that establishment equal to the requirements of the Society. We are glad to learn, too, that no rash or sudden changes will take place, but that the various suggestions and plans for the complete remodelling of the management and maintenance of the gardens will undergo very careful deliberation by the Council, and when the plan for future guidance is fully determined on the different improvements contemplated will be gradually introduced, as the financial position of the Society will enable the Council to carry them out. If all this be true, we feel sure that the Council are acting wisely, and we hope a large accession of new members will be the result, and that another year will see Chiswick regain its former position, if it does not entirely surpass it, which, from all we hear, it is very likely to do.

THE BATH HANOVERIAN BAND COMMITTEE held their last Floral Fête in Sydney Gardens, on the 17th ult. We have before alluded to the public spirit of the gentlemen forming the committee in restoring horticultural exhibitions in this city, and we are pleased to bear record to the spirited manner in which the exhibitors have supported them: as an instance of this we may cite Wm. Simpkins, Esq., of Everleigh, Wilts, who took a van-load of large specimen plants a distance of forty miles by land carriage, to compete for their prizes. The exhibition was a very varied and extensive one, and fully maintained the character of the exhibiting body, many of the productions furnished being admirable specimens of good culture; foremost among these were the Fuchsias exhibited by Mr. Mold, gardener to William Simpkins, Esq.—better examples of good cultivation we never saw, and that is saying a good deal. Mr. Mold, jun., of Devizes, had also some fine plants; as had — Taylor, Esq., Bath. The class in Miscellaneous Stove and Greenhouse plants was well contested, Mr. Simpkins being first, and Mr. Burton, of Laycock, second. The classes indeed were all well contested: Heaths, good for the season; cut flowers, in great abundance; Mr. Keynes, of Salisbury, was first with a fine collection of Dahlias, and besides had some splendid seedling flowers, which were awarded first-class certificates. We have not room to enumerate all

the various classes, which filled five or six large tents. The show of fruit was extensive. Wall-fruit particularly good, notwithstanding its scarcity in many places; Pines only middling; and some of the Black Grapes were a little deficient in colour. A very numerous and fashionable company visited the Gardens on their being opened to the public; and in the afternoon crowds of visitors, brought by excursion trains from the country, enjoyed to them the rare treat of witnessing a horticultural show.

REVIEWS.

Priced Catalogue of Plants sold by Wm. Rollisson & Sons, Tooting, near London. 1856.

THE catalogue for the present year issued by this well-known and esteemed firm is very carefully got up, and contains an extensive assortment of general nursery stock not often met with. The lists of plants in the different sections under which they are arranged contain the names of nearly every plant worth growing, and where a selection is made, it is judiciously done. New and rare plants form an important feature, and are very correctly described.

Catalogue of Stove, Greenhouse, Hardy Exotic and British Ferns, grown for sale by Robert Sim, Nurseryman, Footscray, Kent.

EXTREMELY well arranged, and the descriptions of each species clear, comprehensive, and correct, so far as a hasty look over enabled us to judge. The occasional hints on the best way of managing particular kinds will be very valuable to young growers, to whose especial attention we must refer the author's judicious instructions on air and soil, water and insects—to be found in the introductory page—as well as to his remarks on Ferns grown in glass cases.

The Field Newspaper.

WE name this weekly paper in our review, for the purpose of adding our testimony to the able manner in which our very old friend Mr. Errington conducts the gardening department. We should, in truth, have been disappointed were it not so, for Mr. Errington has been long known to us as a first-rate practical gardener, as well as a theorist, and who perhaps has done more than any other cultivator to effect a reform in the cultivation of fruit trees. We wish him every success.

GOSSIP.

WE understand that Messrs. Waterer and Godfrey, of Knaphill, the eminent growers of American plants, intend holding a grand exhibition of that popular tribe of flowers at Manchester, next season, in connexion with the Fine Arts Exhibition, which is already creating much interest in the neighbourhood and manufacturing districts generally.

CRYSTAL PALACE EXHIBITION.

THE third and last of these grand horticultural displays took place on the 10th, 11th, and 12th ult. Considering the lateness of the season, the exhibition was, in most respects, a satisfactory one; for although the absence of the brilliant coloured flowers which attract so much attention in May and June, was sensibly felt, there were many interesting plants of another kind which are often overlooked amidst the gay productions of summer, or are not then exhibited at all. If we missed the Pelargoniums, Azaleas, Ericas, and splendid groups of Miscellaneous Plants and Orchids, which principally make up the two former exhibitions, the eye had time to admire the graceful and interesting appearance of the Ferns and Lycopods, which were contributed in abundance, and well repaid a close examination. The ever-varying shapes and tints of their beautiful fronds affording delight and gratification to the eye of taste amply compensated for the loss of their more showy rivals. Groups of plants with ornamental foliage were also very numerous and striking; the collections exhibited by Mr. Veitch particularly so. What noble and yet graceful forms the leaves of some tropical plants assume!—what a study for artists and modellers they present! Let us hope that young artists will avail themselves of the opportunity the exhibition of these groups afford, and that we shall see the beautiful foliage of many of these plants transferred to decorative purposes connected with our manufactures, many branches of which sadly want a change in the shape of new designs.

Of Stove and Greenhouse Plants there were one or two collections, and we also noticed groups of Verbenas, Cockscombs, Balsams, Scarlet Geraniums, and Fuchsias. Likewise Achimenes, Pitcher-plants, and a few of the autumn-flowering varieties of Heaths.

Fruit was largely exhibited, and generally well grown; there was, however, no very striking productions to call for particular notice, and some exhibitions were decidedly inferior. Mr. Tillyard had bunches of the new Brighton Grape, Marchioness of Hastings, which closely resembles the White Nice, but is said to be different: it forms a large somewhat loose bunch, with oval berries, of a fine amber colour when ripe, and has an agreeable flavour. Mr. Snow's Black Muscat was also there in the shape of a rather straggling bunch, not very large, with oval berries of a brownish black colour; skin thick, flavour very musky and vinous; stones rather large; the bunches were over-ripe, and had been in better condition. A dish of Stanwick Nectarines, from Devonshire, are worthy of remark. They were well grown, and, we learn, excellent in flavour. Of Queen Pine-apples there were one or two beautiful examples from Mr. Barnes of Bicton. Peaches and Nectarines were generally well ripened, but small. Plums and Cherries were good: of the former, there were some admirable specimens of the Jefferson, Washington, Magnum Bonum, Kirks, and Green-gage; Cherries, with one exception (the Florence), were confined to the Morello variety. Of Pears, there were some good Jargonelles. Apples, with the exception of one dish of Ribstons, were not particularly fine.

As regards the prizes awarded under the above heads, we may mention

that they form a long list, for which, we regret to say, it is wholly impossible for us to find room. The competition for them, in all departments, was maintained with spirit, and, as far as we can learn, the decisions of the judges appointed to act on the occasion have given general satisfaction.

Cut flowers, as is usual at autumnal exhibitions, formed one of the great features of the show. They were very numerous, and in some instances extremely good. The show was too late for Hollyhocks, but this was fully compensated for by the magnificent display of Dahlias. There were nine entries for 50 varieties, and 28 entries of 24 blooms each, besides a corresponding number for fancy kinds and seedlings. No seedling varieties were specially selected for prizes, but first prizes for collections of seedlings were awarded to Mr. Turner, of Slough, and Mr. Keynes, of Salisbury; the best of which were Royal Scarlet (Keynes), Lady Popham (Turner), Touchstone (Fellowes), Cherub (Holmes), Conqueror (Keynes), Marion (Fellowes), Lady Paxton (Dodds), King of Fancies (Legge), Lord Cardigan (Keynes), Saturn (Turner), Mrs. Legge (Legge), Delta (Turner), Charles Perry (Keynes), Edward (Dodds), John Stainton (Smith), and Lady Franklin (Rawlings). The following is a list of the awards in this department:—

50 DAHLIAS.—1st prize, Mr. C. Turner, Royal Nursery, Slough, with Sir R. Whittington, Sir C. Napier, Cossack, Earl of Carlisle, Lord Palmerston, Satirist, Edmund Foster, King of Autumn, Grand Sultan, Lollipop, Richard Cobden, Lord Raglan, Ruby Queen, Sir J. Franklin, Miss Spears, Exquisite, Duchess of Wellington, Capt. Ingram, Agincourt, Yellow Beauty, Rosea elegans, Beauty of the Grove, Sir F. Bathurst, Modèle, Miss B. Coutts, Essex Triumph, Perfection, Colonel Windham, Princess, Lady Folkstone, Chance, Lord Bath, Admiral Dundas, Constancy, Bessie, Lady Popham, Shaded Model, Tyrian Prince, Salvator Rosa, Fenella, Fame, Butterfly, Rachel Rawlings, Eclipse, Delta, Harbinger, Cherub, Mr. Seldon, Amazon, Pre-eminent; 2nd, Mr. J. Keynes, Salisbury, with Pre-eminent, Morning Star, Negro, Rachel Rawlings, Andrew Dodds, Amazon, Salvator Rosa, Lord Palmerston, Dutche, Dr. Gully, Lollipop, Sir C. Napier, Lord Bath, Admiral Dundas, Miss Caroline, Hampden Beauty, Richard Cobden, Lord Cardigan, Lady Folkestone, Essex Triumph, Ruby Queen, Princess, Perfection, Edward, Seedling, Hon. Mr. Herbert, Lady Paxton, Omar Pacha, Marshal Pelissier, Goldsmith, Royal Scarlet, Chrysalis, Seedling, Duke of Devonshire, Eclipse, Evening Star, Chameleon, Grand Sultan, Lord Raglan, Exquisite, Miss Nightingale, Seedling, Seedling, The Nigger, Annie, Sir J. Franklin, Seedling, Duchess of Kent, Miss B. Coutts, Mrs. Rawlings; 3rd, Mr. Legge, Marsh Side, Lower Edmonton, with General Faucher, Duchess of Kent, Mountain of Gold, Lord Bath, Bishop of Hereford, Fearless, Hon. Mr. Herbert, Beauty, Beauty of Versailles, Amazon, Seedling, Brighton Beauty, Lilac King, Agincourt, Mrs. Rawlings, King of Yellows, Robert Bruce, Diadem, Mrs. C. Bacon, Scarlet King, Beauty of Sussex, Annie, Annie Salter, Rachel Rawlings, Anticipation, Ruby Queen, Sir R. Whittington, Ne Plus Ultra, Sir R. Peel, Mons. Dugere, Louisa Glenny, Absalom, Seedling, Shylock, Seedling, Sir C. Napier, Fanny Keynes, Seedling, Sancho Panza, Una, Mrs. Legge, Beauty of the Grove, Glenlyon, Goldsmith, Morning Star, Omar Pasha, Crimson King, George Glenny, Mrs. Wheeler, Duke of Wellington; 4th, Mr. C. Kimberley, Nurseryman, Stoke, near Coventry, with Essex Triumph, Negro, Incomparable, Lord Palmerston, Mr. Seldon, Salvator Rosa, Corsair, Lord Bath, Constancy, Bishop of Hereford, Rachel Rawlings, Malvinia, Seedling, Mons. Dugere, Sir C. Napier, Mrs. Rawlings, Miss B. Coutts, Phantom, Sir F. Bathurst, Indispensable, Cossack, Agincourt, Commandeur, Seedling, Richard Cobden, Amazon, Roundhead, Mr. Herbert, Robert Bruce, Sir J. Franklin, Lord Raglan, George Villiers, Seedling, Annie Salter, Annie, John Keynes, Mr. Goudry, Triomphe de

Roubaix, Mr. Charlesworth, Ruby Queen, Pre-eminent, Admiral, Lollipop, Charlemagne, Admiral Dundas, Laura Lavington, Duke of Wellington, Espartero, Mrs. Stowe, Seedling. Extra prizes to Mr. W. C. Drummond, Bath, and Messrs. J. & J. Fraser, Nurserymen, Lea Bridge Road.

Twenty-four DAHLIAS.—1st prize, the Rev. C. Fellowes, Shottisham Rectory, near Norwich, with Pre-eminent, Cossack, Lilac Model, Fanny Keynes, Mr. Seldon, Robert Bruce, Miss Caroline, Sir J. Franklin, Fairy Queen, Bishop of Hereford, Touchstone, Cavalier, Amazon, Sir R. Whittington, Rachel Rawlings, Bessie, Sir F. Bathurst, Miss B. Coutts, Lord Palmerston, Marion, Grand Sultan, Queen Victoria, Capt. Ingram, Lord Bath; 2nd, George Holmes, Esq., Brook Lodge, Norwich, with Lord Palmerston, Robert Bruce, John Dory, Miss B. Coutts, Sir J. Franklin, Cherub, Sir F. Bathurst, Fanny Keynes, Lollipop, Susan, Diadem, Duke of Wellington, Constancy, Salvator Rosa, Perfection, Pre-eminent, The Nigger, Sir C. Napier, Fenella, Amazon, Lord Bath, Bessie, Grand Sultan, Duchess of Wellington; 3rd, Mr. Thomas Leslie, gardener to Mrs. Alexander, Stonehouse, Ramsgate, Beauty of Thanet, Amazon, Mr. Seldon, John Keynes, General Faucher, Cossack, Queen of Lilacs, Duke of Wellington, Mrs. Leslie, Lord Bath, Cleopatra, Agincourt, Sulphurea elegans, Comte de Chambord, Grand Duke, Robert Bruce, J. Edwards, Rachel Rawlings, Sir F. Bathurst, Annie Salter, Pre-eminent, Magnificent, Bishop of Hereford, Constancy; 4th, Mr. J. Sladden, Ash, Sandwich, Kent, with Duchess of Kent, Cossack, Pre-eminent, Fearless, Mrs. Seldon, General Faucher, Bishop of Hereford, Lord Palmerston, Amazon, Richard Cobden, Annie Salter, Beauty of Thanet, Admiral Dundas, Lilac King, Yellow Beauty, Beauty of the Seine, Lord Bath, Lollipop, Annie, Rachel Rawlings, Salvator Rosa, Perfection, The Nigger, Miss B. Coutts. Extra prize, Mr. John Cook, Florist, Notting-hill, London; ditto, Mr. C. J. Perry, Birmingham; ditto, Mr. C. E. Allen, Shacklewell. The other exhibitors in this class were Mr. R. James, Rochester Castle, Stoke Newington; Mr. J. Slipper, Florist, Camden Town; Mr. J. T. Hedge, Reed Hall, Colchester; Mr. Bragg, Star Nursery, Slough; Mr. W. Wakeman, New Church-road, Camberwell; Mr. C. Brown, Kingswood, Dulwich; Mr. John Walker, Thame, Oxon; Mr. Thomas Dalton, Nottingham; Messrs. Colegate and Davies, Florists, Tunbridge; Mr. J. Hollingworth, Maidstone; Mr. Fozard, Hall Park, Paddington; Mr. A. Hogg, Cadlands, Southampton; Mr. George Brush, Gardener to E. Tritton, Esq., Norwood; Mr. A. Moffat, Easton Park: Mr. W. Hooker, Norwood; Mr. Gaines, Battersea.

Twelve FANCY DAHLIAS.—1st prize, Mr. H. Legge, Florist, Lower Edmonton, with Duchesse de Brabant, Baron Alderson, Princess Charlotte, Triomphe de Roubaix, Empress Eugenie, Butterfly, Gloire de Kain, Miss Bathurst, Fancy King, Pigeon, Topsy, Amphion; 2nd, Mr. C. Turner, Royal Nursery, Slough, with Topsy, Mrs. Willis, Mutabilis, Miss Frampton, Butterfly, Miss Herbert, Elizabeth, Comet, Magician, Mrs. Hansard, Princess Charlotte, Pigeon; 3rd prize, Mr. John Keynes, Nurseryman, Salisbury, with Comet, Polyphemus, Empress Eugenie, Charles Perry, Crystal Palace, Tam o'Shanter, Conqueror, Mrs. Spary, Lady Paxton, Florence Nightingale, Spot, Lady Scott Douglas; 4th, the Rev. C. Fellowes, Shottisham Rectory, Norwich, with Empress Eugenie, Comet, Topsy, Inimitable, Duchess of Kent, Cockatoo, Lady Grenville, Jonas, Triomphe de Roubaix, Kossuth, Miss Ward, Miss Frampton. Extra prize, Messrs. Fraser, Lea Bridge-road Nursery; ditto, Mr. C. Kimberley, Stoke, near Coventry; ditto, Mr. Bragg, Star Nursery, Slough; ditto, Mr. W. C. Drummond, Nurseryman, Bath. Mr. Walker, Florist, Thame, Oxon; Mr. George Brush, Gardener to J. Tritton, Esq., Norwood; Mr. J. Sladden, Ash, Sandwich, Kent; Mr. C. J. Perry, Handsworth, Birmingham; Mr. C. Fozard, Hall Park, Paddington; Mr. S. Taylor, Nottingham; and Mr. Gaines, Battersea, also exhibited in this class. Extra prizes were awarded to Mr. C. Turner, Royal Nursery, Slough, for a collection of Seedling Dahlias, consisting of four blooms each of Fenella, Delta, Roland, Satirist, Duchess of Beaufort, Saturn, Lady Popham, and Cherub—three each of Marion and Touchstone; Mr. J. Keynes, Salisbury, for a collection of Seedling Dahlias, viz., six blooms of Royal Scarlet, three of Edward, three of Lord Cardigan, six of Polyphemus, six (fancy) Lady Scott Douglas, three (ditto)

Charles Perry, six (ditto) Conqueror, three (ditto) Tam o'Shanter. Seedling Dahlias.—Three blooms of Lady Franklin were exhibited by Mr. Rawlings, Bethnal Green; three blooms of Albion, by Mr. C. E. Allen, Shacklewell, London; three blooms of seedling M.M., and a miscellaneous collection unnamed, by Mr. John Slipper, Camden Town; four blooms of fancy Dahlia, Fancy King, by Mr. Legge, Lower Edmonton; three blooms of Samuel Brown, three of Beauty of Handsworth, and three (fancy) of Blushing Bride, by Mr. C. J. Perry, Handsworth, Birmingham; three blooms of White Seedling and three of Mr. Joseph White, by Mr. G. Brigg, Handsworth, Birmingham.

Twenty-four Hollyhocks, cut blooms.—1st prize to Messrs. A. Paul & Son, Cheshunt, for Glory, Solfaterre, Louis Napoleon, Sulphur Queen, Glory of Cheshunt, Brennus, Beauty of Cheshunt, Village Maid, Miss Ashley, Hon. Mrs. Ashley, Pearl, Lord Jocelyn, Lizzy Improved, Seedling, Lemonade, Seedling, Memnon, Avalanche, Rosy Morn, Purple Perfection, Queen of Whites, White Globe; 2nd, Mr. W. Chater, Saffron Walden, Essex, with Sulphur Queen improved, Lilacina, Mr. J. Clark, Golconda, Surpass Lizzy, Black Prince, Pourpre de Tyre, Cerise Unique, Phœbe, Sceptre d'or, Fearless, Pre-eminent, Lizzy Roberts, William, Sulphurea, Géant des Batailles, Queen of Oude, Lizzy, Incomparable, Ignea, Purple Perfection, Seedling, Leonora, Seedling; 3rd, to Mr. C. Turner, Royal Nursery, Slough, with Comet, Lemon Queen, Souvenir, Brennus, Mr. Parsons, Vulcan, Black Prince, Argo, Beauty of Cheshunt, Lilac Model, Julia, Lizzy, Crimson Perfection, Miss Ashley, Ruby, Eleanor, Pourpre de Tyre, Walden Rival, Model of Perfection, Orestes, Canary Bird, Unique, White Globe, Eugenie; 4th, Mr. Bragg, Star Nursery, Slough, varieties not named.

Hollyhocks, Miscellaneous Collection in Spikes.—1st, Mr. W. Chater, Nurseryman, Saffron Walden, for Mr. J. Clark, Sir W. Middleton, Seedling 154, White Globe, Purple Perfection, Delicata, Ignea, Jabez Chater, Sulphur Queen Improved, Walden Gem, Lilacina, Alexandrina, Lizzy Roberts, Golconda, Lady Middleton; 2nd, Messrs. A. Paul & Son, Cheshunt, with Beauty of Cheshunt, Seedling, Purple Perfection, Seedling, Lizzy Improved, Seedling, Walden Gem, Seedling, Queen of Whites, Seedling, Louis Napoleon, Seedling, Solfaterre, Rosy Morn.

Twenty-four German Asters.—1st, R. H. Betteridge, Esq., Milton Hill, Abingdon, Berks, with some of the finest flowers ever seen; 2nd, Mr. J. Walker, Thame, Oxon; 3rd, Mr. Thos. Westbrook, Abingdon; 4th, Mr. R. James, Rochester Castle, Stoke Newington; Extra Prize, Mr. John Lewis, Hampton Wick; ditto, Mr. James August, Beddington. The following also exhibited in this class: Mr. S. Evans, gardener to C. N. Newdegate, Esq., M.P.; Mr. W. Hudson, Wandsworth; Mr. G. Smith, Wade's Hill, Herts; Mr. W. C. Drummond, Bath; Mr. J. T. Hedge, Colchester; Messrs. Colegate & Davis, Tunbridge; Mr. Gaines, Battersea; Mr. W. Wakeman, Camberwell; Mr. C. Brown, Dulwich; J. Thomassett, Esq. (no address); Mr. P. Parker, gardener to P. Secretan, Esq., Croydon; Messrs. J. & J. Fraser, Lea Bridge Road; W. Hodson, Esq., Leyton, Essex; Mr. J. Bates, Oxford; Mr. W. Hooker, Norwood; Mr. Taylor, gardener to Hon. A. Willoughby, Twickenham; Mr. H. Graham, gardener to J. J. Cope, Esq., Epsom; Mr. Bragg, Slough; Mr. W. Monk, Tottenham Grove; Messrs. A. Paul & Son, Cheshunt; Mr. J. George, gardener to J. W. Nicholson, Esq., Stamford Hill; Mr. G. Lawrence, gardener to H. Yates, Esq., Penshurst, Kent; Mr. G. P. Francis, Hertford.

Pansies were exhibited by Mr. James August, Beddington, Surrey; ditto Mr. W. Bragg, Star Nursery, Slough.

Verbenas.—1st, Mr. Weatherill, Hornsey Road.

Fifty Roses.—1st, Mr. J. Mitchell, Maresfield, with H.P. La Reine, H.P. Souvenir de Leveson Gower, Tea Vicomtess de Cazes, B. Acidalie, H.P. L'Enfant du Mont Carmel, B. Dupetit Thouars, H.P. William Jesse, B. Louise Odier, H.P. Auguste Mie, H.P. Géant des Batailles, H.P. St. Jean, B. Souvenir de Malmaison, H.P. Madame Hector Jaquin, N. La Biche, H.P. Soleil d'Austerlitz, B. Pourpre de Tyre, N. Ophirie, H.P. Baron de Kermont, Tea Abricoté, H.P. Leon Plee, Tea Madame Macey, H.P. Pourpre Royale, Tea Safranot, H.P. Theocrite, H.P. Louis Bonaparte, H.P. Baron de Heckeren, H.P. Comte de Paris, B. Aurore de Grand, H.P. Duchess of Sutherland, C. Archduke

Charles, H.P. William Griffiths, H.P. Pius the Ninth, Tea Louise de Savoie, H.P. Madame Maison, H.P. Prince Chipetouzikoff, H.P. Duc de Nemours, H.P. Caroline de Sansalles, H.P. Jules Margottin, H.P. Le Leon des Combats, Tea Gloire de Dijon, H.P. Queen Victoria, H.P. Paul Desprez, Tea Virginalis, H.P. Lady Shelley, Baronne Prevost, H.P. General Jacqueminot, H.P. Alexandrine Bachmeteff, H.P. Louise Peyronney; 2nd, Messrs. A. Paul & Son, Cheshunt; dissimilar to the above stand were, B. Francis Henricq, B. Queen, Tea Madame Bracey, Madame de St. Joseph, B. Aurore de Guide, H.P. Baron Larry, Tea Madame Villeimor, Tea Safrano, Tea Devoniensis, T. Pombrienne, Tea Narcisse, Tea Originale, C. Madame Bosanquet, H.P. Comte de Nanteuil, B. Amosa, H. P. Triomphe de Paris, H.P. Duchess d'Orleans, B. Vorace, B. Marquis d'Ossory, H.P. Madame Duchere, B. Pierre de St. Cyr, H.P. Joan of Arc, H.P. Count Bobinsky, N. Ami Vibert, B. Edouard Desfosses, Tea Niphetos; 3rd, Messrs. H. Lane & Son, Berkhampstead; 4th, Mr. E. P. Francis, Nurseryman, Hertford. Messrs. J. and J. Cranston, King's Acre, Hereford; and Mr. E. R. Greenus, Nurseryman, Watford, also exhibited in this class.

For Twenty-five Roses.—1st, Mr. Geo. Brush, gardener to J. Tritton, Esq., Norwood, Surrey, with B. Queen, B. Palais du Crystal, H.P. Josephine Gordon; H.P. Auguste Mie, B. Prince Albert, H.P. Caroline de Sansalles, Tea Mrs. Bosanquet, Tea Gloire de Dijon, H.P. Dupetit Thouars, H.P. Madame Desprez, H.P. Paul Desprez, Tea Ophir, B. Madame de Longchamps, Tea Goubault, H.P. Vorace, H.P. Marquis Boccella, H.P. Dr. Jouillard, H.P. Madame Andre, H.P. Gen. Jacqueminot, N. La Biche, and five others; 2nd, Mr. S. Evans, Adbury, Nuneaton; 3rd, A. Rowland, Esq., Lewisham.

Twenty-four Roses.—1st, Mr. Mitchell, Maresfield; dissimilar to his first stand were, Tea Adam, Tea Josephine Malton, H.P. Reine des Fleurs, H.P. Capt. John Franklin, H.P. Col. Rougemont, Tea Elise Sauvage, H.P. Eugene Sue, H.P. Madame Oger, B. Souvenir de Malmaison; 2nd, Mr. S. Evans, Adbury, Nuneaton; 3rd, Mr. E. P. Francis, Hertford; 4th, Mr. G. Wortley, gardener to Mrs. Maubert, Norwood; Mr. G. Brush, Norwood, Surrey, disqualified; Mr. Graham, gardener to J. G. Cope, Esq., West Hill Lodge, Epsom, also exhibited in this class.

It will therefore be seen from the number of entries that the judges had no easy task to perform in adjudicating the prizes, considering the brief space of time allowed them for that purpose.

Before concluding our report, we must again repeat our conviction, that the Palace is not the place for holding horticultural exhibitions; nothing is seen to advantage, owing to the strong glare of light and the many detracting objects around. We are not alone in our views on this point, for it was the general opinion of all the exhibitors, and however advantageous the Palace may be to the public—as a safeguard against a rainy day—it is by no means calculated to show plants off to the same advantage as a canvas tent.

CALENDAR FOR THE MONTH.

Auriculas.—These having been repotted, and attended to as directed last month, continue the directions there given.

Azaleas.—No time should be lost in getting these into their winter quarters; the pots should be well washed, and the plants neatly tied. Look carefully over them for thrips, and any plants found infested with them should be placed in a pit and be well fumigated with tobacco three or four times. Those plants that are well set with bloom buds

should be arranged in the most lightsome places; the others may be placed in the more shaded part of the house.

Camellias.—Clean, tie, and get these into their winter quarters; thin the buds when they are set rather thickly.

Carnations and Picotees.—Complete taking off the layers as soon as it can be accomplished, getting them established in small pots. Those which have already drawn root should have plenty of air both night and day, and but little water, keeping the plants clear of dead foliage and green-fly.

Cinerarias.—These will be growing fast at this season and are liable to be attacked with mildew, the greatest of enemies to this plant. If taken in time, however, it is easily kept under by dusting the leaves infested with sulphur. Give a good shift to such plants as are required for early blooming, with plenty of growing room.

Cold Frames.—Mignonette, Stocks, Neapolitan Violets, &c., in frames, will require all the exposure possible in dry weather. In many places these are turned to a variety of uses. Whatever plants are placed in them, every endeavour should be made to get the growths well matured; when this is accomplished, by keeping them tolerably dry and giving abundance of air when possible, a very great variety of plants can be safely wintered in these structures.

Conservatory and Show-house.—All large plants which have stood out during summer should now be got in without loss of time; the pots should be well cleaned, and the plants tied if they require it. Creepers done flowering should be thinned and cut back, so as to give all the light possible. Do not by any means crowd the plants, and do not admit either a sickly or bad specimen into the house. Tastefully arrange the flowering plants about the house; ventilate freely both night and day, and keep everything in the neatest order.

Cucumbers.—Plants for winter bearing should have abundance of air during the whole of the month if the weather permit—they should have a steady bottom heat and a night temperature of about 65°. Plants in bearing will require a moist warm atmosphere, and should occasionally receive a soaking of liquid manure.

Dahlias.—No opportunity should be lost of gathering seed on a dry day, as well as marking promising seedlings—such as are thought worthy of a trial the second season. These should be of a new colour, dissimilar in character from existing varieties, or of greatly improved form. Pot roots may be stored towards the end of the month, if in a dry state. Next month will be time enough for taking up roots from the ground.

Flower Garden.—The late cold, wet, and windy weather has had its effect on these; those rich masses of colours, which but a short time ago reflected such brilliancy, are now beginning to fade—a few degrees of frost, and then all their glory for this season is gone. Collect seeds of any desirable sorts. Take up and pot all plants intended to be kept over the winter. If a stock of cuttings be not already got in, not an hour should be lost in doing so. Clear away every plant as soon as it becomes unsightly; by clearing away all dead leaves and decaying stems, and by keeping everything neat and trim, a tolerable appearance

may be maintained to the end of the month, unless very severe or wet weather sets in. Plant bulbs as soon as the beds are at liberty. Where alterations are intended proceed with them at once, whilst the days are a tolerable length.

Forcing Ground.—Sow French Beans. Prepare slight hotbeds for salads, and get a good heap of fermenting materials together, to be in readiness for covering Seakale and other purposes.

Fruit (hardy).—Gather Apples and Pears on fine days; they should be all stored before the end of the month; the greatest care should be taken in gathering it, as they soon show the slightest bruise. Look over the fruit previously got in. The house should be kept cool and dry. We always fasten a card on the shelf in front of each sort—on it we write the name of each sort, the date when gathered, and afterwards the time when fit for table: annual records of this description are of considerable interest. If the weather should be wet, late Plums—such as Golden Drop, Imperatrice, &c.—should be gathered, and placed in an airy situation in the fruit room. All fruit should be quite dry when gathered. Look over Peach and Nectarine trees, and remove the superfluous shoots if there be any. Make all necessary preparations for the planting of fruit trees, which may now be proceeded with. The first and most material point to be attended to is the thorough drainage of the borders; if this be not sufficient it is of no use planting fruit trees, as there will be nothing but disappointment eventually, even if they should make a little progress for a year or two. If the drainage is perfect, and the border a good loamy soil, then, with proper attention, there will be few disappointments. In planting, be careful to spread the roots well out, put fine soil over them, but do not tread on it, the autumn rain will soon settle the soil. Cut out the old Raspberry canes, if not previously done—new plantations may now be made. Remove all runners from Strawberry plants, if not already done, and manure and dig about those in rows.

Greenhouse (hard-wooded.)—Now the plants are housed, air should be admitted abundantly. In arranging the plants, set the more delicate and tender kinds in the more sheltered situations. Make everything as neat and tidy as possible. *Soft-wooded plants.*—These should all be housed without delay, and after they are all got in a slight fumigation is necessary, to cleanse them thoroughly before winter. Scarlet Salvias, Ageratums, &c., if housed before they suffer from the weather, will continue gay for a long time.

Hollyhocks.—Like the Dahlia, gather seed as often as it can be procured ripe. Cuttings may still be put in. Choice kinds should be preserved by potting up the roots. These produce cuttings during the winter, which strike readily in gentle heat.

Kitchen Garden.—Continue to earth up Celery when dry, and to tie up Endive to blanch. Towards the end of the month take up Carrots, Parsnips, Beet, Salsafy, Scorzonera, &c., and store away when dry; also late crops of Potatoes. Plant out a good breadth of Cabbage. Plant Lettuces on sheltered borders. Plant Cauliflowers under glasses—also prick out a lot, either into frames or a sheltered situation, and a few potted and kept in frames over winter, when planted out in spring,

will oftentimes come in early and be very useful. Clear the garden of all weeds, all dead and decaying vegetables, and throw up into steep ridges all vacant ground. Commence intended alterations. Bear in mind that on heavy soils thorough drainage is the basis of good cultivation.

Orchard House.—When all the fruit is gathered, every attention should be given to the perfect maturing of the buds; a dry atmosphere and thorough ventilation will go a great way towards effecting this; the plants will require but little or no water at roots.

Pansies.—Such as are required for wintering in pots should now be potted up. Strong plants should be planted in beds for early flowering, and the small late-struck plants wintered in stores, which may be planted out late in March for the second bloom. Towards the end of the month plant out seedlings.

Pelargoniums.—Now is the time to make a strong healthy plant, such as cannot fail to produce a crop of fine healthy bloom next season. The principal cause of failure in the growth of the Pelargonium is a want of attention to this one point—the plant should be grown principally in autumn, and not have all to do in the spring. During winter it should be comparatively quiet: at no time let the houses become cold and damp.

Pinks.—If not already planted out, as directed last month, no time should be lost in doing so, that the plants may become established before winter sets in.

Pleasure Ground.—Rolling, mowing, and sweeping must be regularly attended to; the leaves will now begin to be troublesome. This is the season to proceed with alterations. No time should be lost in transplanting of large evergreens; when properly managed, trees of almost any size may with the greatest safety be removed.

Roses.—A more than ordinarily severe attack of mildew has sadly marred the autumnal bloom in most localities, but the dry weather will so ensure the perfect ripening of the wood, that they may be safely removed earlier than usual. Where additions to or new plantations are in contemplation, no time should be lost in removing some of the old soil, breaking up the under spit, and replacing it with fresh loam and rotten manure in equal proportions. Give orders for plants early, to prevent disappointment. *Roses in pots.*—Those intended for earliest forcing should now be cut back and repotted in some good soil, and kept close and well watered, that their new roots may be made before introducing them into the greenhouse.

Stove.—The most important operations in this department, at this season, consist in keeping the plants clean and neat and properly watered. The temperature at night should not much exceed 65°.

Strawberries for forcing.—These should now have very little water given to them; the principal point to he aimed at is to get the crowns as well formed and matured as possible before the short dark days. Pinch off all runners, and stir up the surface of the soil when dry, if it be cakey.

Tulips.—Keep the beds dry, in readiness for planting early in November. The soil should be frequently turned.

Obeliscaria Pulcherrima

Plate 120.

Printed by C. Chabot

OPELISCARIA PLATYPHYLLA.

OF THE US..

ALTHOUGH this plant appears to have ... ...
tanists, a brief description of it being ...
Prodromus," vol. v., page 559, pub... ...
within the last year or two that it ...
...ish gardens, a circumstance somewhat ...
great variety of plants that have been ...
roduced in numbers of seed from Texas, ...
lieved to be a native. For an opportunity ...
exact representation before our readers ...
rs. Carter & Co., Seedsmen, 238, ...
...s introduced and raised, and ... ...
in the present summer.

...s erect growth, with ... ...
...ed. The leaves are ... ...
...ed. The latter are long and ... ...
one another. The flowers are ... large ...
...ance, not unlike those of ... ...
...ing reflexed and of a ... ...
and margin deep ... ...
very much resemb... ...
...es Ruellockia caluc... ... which
...ears to be very closely related.
We are unable to say whether it is a perennial or not, but we ...
...mend it to be treated as a hardy ... if not, as known,

OPEN BRICK WALLS

...ming this case for the prosecution ...
...concluded (see p. 2?4 of our last ...
...the force of witnesses, some significant ...
...announced that several of them were ...
...ght suspected, and their travelling ex... ...
...ultimately agreed to proceed without ... ...
part of prosecutor, as the whole ... ...
...stage. The first witness was Mr. W... ...
...r, Esq., Streatham, Surrey, who ... ...
...s the gist of his evidence that in some ... ...
...and ravines, but in most places he was ... ...
...as good or better than those covered, and ... ...
...good crops upon unprotected land upon ... ...
...fruits the uncovered trees the most ... ... fruitfulness ...

OBELISCARIA PULCHERRIMA.

(PLATE 119.)

ALTHOUGH this plant appears to have been long known to botanists, a brief description of it being given in De Candolle's "Prodromus," vol. v., page 559, published in 1836, yet it is only within the last year or two that it has found its way into British gardens, a circumstance somewhat remarkable, considering the great variety of plants that have been from time to time introduced by means of seed from Texas, of which country it is believed to be a native. For an opportunity of placing the annexed representation before our readers we are indebted to Messrs. Carter & Co., Seedsmen, 238, High Holborn, by whom it was introduced and raised, and flowered in the latter part of June in the present summer.

It is of erect growth, with slender stems, smooth, and slightly channelled. The leaves are winged, with the lobes deeply divided. The latter are long and narrow, and rather distant from one another. The flowers are solitary and have a striking appearance, not unlike those of the French Marigold, the radiant florets being reflexed and of a brownish copper colour, with the points and margin deep yellow. The centre is elevated, ovate-oblong, very much resembling an acorn; and in this respect it approaches Rudbeckia columnaris, a species of a genus to which Obeliscaria appears to be very closely related.

We are unable to say whether it is a perennial or not, but we would recommend it to be treated as a half-hardy annual until it is better known,

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OPEN BRICK WALLS *versus* PROTECTION.

IN resuming this case for the prosecution, which it will be remembered was adjourned (see p. 294 of our last number) in consequence of the non-attendance of witnesses, some slight murmurings were heard, when it was announced that several of them were still uncourteously absent, although subpœnaed, and their travelling expenses paid; however, it was ultimately agreed to proceed without them, although reluctantly on the part of prosecutor, as he wished to give defendant every available advantage. The next witness was Mr. Wm. Taylor, gardener to J. Costar, Esq., Streatham, Surrey, who stated that the crops were good in his neighbourhood; that in some cases defendant was used as nets and canvas, but in most places he was not admitted, and the crops are as good or better than those covered, and he has generally seen equally good crops upon unprotected as upon protected trees, and in most cases he finds the uncovered trees the most healthy. This witness further

stated that he considered the drainage of borders is not so well attended to as it ought to be.

Mr. Thomas Hunter, Walsingham, Norfolk, was here brought forward, and his statement was that the crops were very thin indeed for miles around him; that protection was used in several instances in the form of Haythorn's netting, but he had as much fruit where no covering was used, and more Apricots upon the uncovered than upon the covered trees, and crops upon an open east wall were far better than upon a covered south one; and this is generally the case with him, although the trees are in equal health and vigour; his subsoil consists of chalk, consequently artificial drainage is quite unnecessary.

Mr. Poole, Pockington Hall, Coventry, next deposed to the crops being very short in his neighbourhood: he never remembered such a failure; that a part of his Peaches and Apricots were covered with Haythorn's hexagon and old herring nets; that his subsoil being gravel needed no artificial drainage; the best crops he has this season were upon unprotected trees; still witness considers a broad portable coping necessary.

Mr. Wm. McPherson, gardener to Lord Calthorpe, Perry Hall, Birmingham, here stated that the wall-fruit crops in his neighbourhood were almost a complete failure, and that he had used Haythorn's hexagon net; also that his borders are naturally drained; he also stated that wherever he had been during the past season he had not seen anything like a crop, whether protected or not, they all having shared the same fate, even *upon walls covered with glass to protect* them. One place he was at there was a quantity of Pear trees under the glazed walls, but there were not twelve Pears on all the trees.

Mr. Peter Grieve, Culford, Bury St. Edmonds, was next called. He stated that the crops of Peaches, Nectarines, Apricots, and Morello Cherries were very good with him: that Plums, Pears, and Apples were very deficient; he has a large portion of wall twelve feet high, a portion of which he always covers with straw ropes and a part he leaves exposed, and this season the crops upon the unprotected are quite equal to the protected portion; the subsoil consisting of gravel, artificial drainage is unnecessary. Upon cross examination this witness stated that he had not always seen as good crops upon unprotected as upon protected trees, and his conviction was that a slight protection of some kind was indispensable, especially for Apricots. (This witness's mode of protecting being rather novel, we will give it at length some future day.)

Mr. Wm. Tolson, Copped Hall, Tolteridge, Herts, next deposed to the crops being very moderate in his neighbourhood; that Haythorn's netting was used for Peaches, but Apricots were fully exposed, and good crops were the result, although the blossoms were actually covered with black frost this spring; his subsoil being very porous, no drainage is needed, and from his general experience he would very warily protect.

This being the conclusion of the witnesses for the prosecution, permission was asked to make one or two extracts to show the light defendant was looked upon by old horticultural writers of the last century. Walter Nicol, a very celebrated practical gardener and author, says in his works on gardening, A.D. 1798, "It is a common

practice to screen the blossoms of wall trees by sticking twigs of Larch or of evergreens, as Firs or Laurels, betwixt the branches and the walls in such a manner as to overhang the blossoms where they are thickest, and some instead of these use the leaves of strong Fern; but all these things are an objection, on account of their shading the blossom too much, by which it is rendered weak, and the fruit produced often drop away before arriving at any considerable size, so that all this trouble goes for nothing, as there would probably have been as good a crop had the trees been left to their chance."

The next extract was from old Philip Miller, who, it would be remembered, was a very celebrated gardener at the commencement of the last century; in his "Gardeners' Dictionary" of 1741, he says that "There is not anything in the business of gardening which has more exercised the thoughts of the curious than how to preserve their tender sorts of fruit from being blighted in the spring." After stating the contrivances in use in his day, he goes on to say "that the blights which are so often complained of do not proceed from any inclemencies of the season; where they are most subject to what is called 'a blight,' we shall find the branches very small, weak, and not half ripened, as also trained in very close to each other. These branches are, for the most part, full of blossom buds (which is chiefly obtained by their want of strength); these buds do indeed open, and to persons not skilled in fruit trees show a great prospect of a plentiful crop, whereas the whole strength of the branch is spent in nourishing the flowers, and, being unable to do any more, the blossoms fall off, and the small efforts of the fruit buds are checked, so that many times the greatest part of the branch dies away, and this is called a *great blight*, whereas at the same time it may be often observed that trees which were stronger, though placed in the same soil, exposed to the same aspect, and subject to the same inclemencies, have escaped very well when the weak trees have appeared to be almost dead, which is a plain indication that it proceeds from some cause within the tree." He then goes on to state that all this may be remedied by not over-crowding and by judicious pruning and management, so as not to exhaust the whole nourishment from the roots, and by not planting too deep.

For the defence it was contended that the defendant had just cause for the course he had pursued, for where was there a philosophical law that would bear out the opening case for the prosecution? for in the first place it was well understood that our seasons had very much changed, that our springs were too late, that our summers were too short, and our autumns too cold; in fact, that our climate had of late years very much deteriorated, so much so that defendant had become a very necessary appendage to gardening operations, and it was hoped to prove by the witnesses for the defence that wherever well directed practical tests have been scientifically applied, the decisions have always been in favour of defendant; for it was well understood that a rapid radiation of heat takes place from the earth and all porous bodies connected therewith, commencing at sunset and continuing until all the heat accumulated during the previous day is radiated or expended, and as has been proved by all keen observers of the thermometer, that the temperature of the

atmosphere is always lowest and the frosts most keen about the period of sunrise, these tests will therefore prove that the accumulated heat is exhausted by this period, and the clearer the atmosphere the more rapid the radiation; hence, one great point in defendant's utility in preventing the exhaustion of this radiation. Again, as to the statement of those witnesses of prosecutor's, who deposed to having had equally good crops upon unprotected as upon protected trees, it was hoped to show the fallacy of this; for it was very much doubted that if two trees in equal health and vigour, and similarly situated and treated through summer, the one efficiently protected and the other fully exposed, whether the exposed one on an average of seasons does equally well as the protected one. Prosecutor had also laid very great stress upon thinning his trees and draining his borders,—operations which were certainly very desirable to the well-being of the tree; but what had that to do with protecting the blossoms through those inclement nights our springs are subject to? We all know that where moisture is, frosts will sooner destroy; therefore, as the pistil of every flower contains a certain degree of moisture, a covering of some kind is indispensable to protect that flower. And as to the charge of being an unnecessary addition to garden expenditure, it was not to be denied but that he caused a small additional outlay as regards both material and labour; but, as a recompense, he invariably ensured the luxury of a crop, and no gentleman who wished to enjoy his luxuries would object paying for them. It was here stated that those witnesses for the prosecution who had stated that they had equally good crops upon the unprotected as upon the protected portion of the trees would be recalled and re-examined touching those points.

Those witnesses upon being recalled and being subjected to a sharp cross-examination, testified that the trees they had mentioned were in many cases side by side; and to make assurance doubly sure they had in most instances protected their best trees.

The following witnesses were called upon to support the defence:—First, Mr. H. Constantine, Hillingdon Court, Uxbridge, who deposed to having abundance of fruit on south and west aspects, but on east aspects he had scarcely any; that he protects with Hall's garden netting; that he thoroughly drains his borders; in several places in his neighbourhood this point is neglected, but their crops are very inferior; he had frequently seen crops cut off when not protected, although he must say that he did not agree with heavy protection excepting it is well attended to.

Mr. Jno. Powell, Royal Gardens, Frogmore, next deposed to the crops in general being below the average in his locality, and that Pears, Plums, and Cherries were very scarce; that there was no standard fruit to speak of; that protection was used in those gardens, and also in the gardens around him; the covering they use in his locality is what they call Dorsetshire cheese cloth, on rollers, that can be drawn up and down at pleasure. Netting is also used for south-west aspects, which this witness considers do not require so much protection, on account of the sun not striking upon the trees so soon in the morning. Artificial drainage is not necessary, they being upon a bed of loose gravel, the

water quickly finds its way through to the Thames. This witness also further stated that throughout his experience and general observations he had seen the advantage of protecting in spring, more especially Peach and Nectarine trees; he considers it not only ensures a crop but frees the trees from the injurious effects of blister; he also considers the best way is to have the coverings upon rollers, so that by a little attention the trees can be secured from hot sun, hail, drenching rains, and spring frosts.

Ribston Park. THOMAS W. ABBOTT.

(*To be continued.*)

DWARF BEDDING DAHLIAS.

As almost every one is enquiring for what are termed bedding plants, *i.e.*, for continuous summer blooming plants, it is not at all surprising that Dwarf Dahlias should have been resorted to, to add to the variety and beauty of our flower gardens and shrubberies. These are now grown to a considerable extent; but the question is often asked, which are the most suitable kinds, as hitherto only two or three varieties have been grown for this purpose, but there are others that we think equally adapted for the purpose that have not hitherto been tried. The best of those already grown is, we think, Prince Arthur, a bright crimson, very erect habit, with flowers on short stiff footstalks, yet well above the foliage. Its height is about two feet, and it is in every respect a good kind for beds, for the purpose of ribboning or to be grown as single plants for the borders.

Zelinda is a dwarfer kind, of a dark purple colour, and is tolerably well known and cultivated; height about 18 inches. We have also the Crystal Palace Scarlet, a variety with starry ragged scarlet flowers, which, if planted early, are produced in profusion. It requires pegging down for beds, as it is a taller grower than the preceding sorts. It should be grown in poor soil, or it will not flower freely enough to be showy. It has been grown in some localities for a considerable time, and has only recently received the name it bears. Captain Ingram has never yet been tried for bedding purposes, being quite new. It grows no higher than Zelinda, dark crimson in colour, and produces fine shaped flowers in great abundance. It is well worthy to be grown where a dark kind is required. Queen of Whites is also a good shaped kind, and very free blooming as well, maintaining its purity of colour in the hottest weather; height three feet. Titian is a bright clear yellow, and shows its flowers well above the foliage, but, like Zelinda and Prince Arthur, has no pretension to form; height three feet. It will thus be seen that we are possessed of white, yellow, scarlet, bright crimson, dark crimson, and purple Dahlias suitable for the purposes of bedding, the tallest of which is the Crystal Palace Scarlet. All these enumerated, however, if used as bedding plants, are best pegged down to the ground.

ROSES, OLD AND NEW.

Roses, what a theme! What beautiful things to look at, to talk about, to write about, to smell, to cultivate. Would that Dickens were a lover of Roses, so that we could have a monthly article on their numberless attractions. Alas! Rose growers have not poetry enough in their composition to write poetically about such flowers; and so I will be prosy, and talk first about old Roses, and yet not the oldest. I wonder if any of your readers remember the "two thousand varieties" cultivated some thirty or forty years ago by the Messrs. Loddiges at the Hackney Nursery. I do, and also perfectly recollect my surprise on hearing so many euphonious French names applied to Roses appearing nearly all alike; for most of them were varieties of Rosa gallica, with very slight shades of difference. Soon after this time some lions made their appearance, and the Celestial Rose, with its delicate blush tint, and the Tuscany, with its dark velvety crimson, each sold at one guinea, made a great noise in the Rose world. Soon after this the George the Fourth attained great popularity, and it is still a fine dark Rose; this, Brown's Superb Blush, and the Wellington, were the first of the race of Hybrid China Roses, which for some years were so popular. It was somewhere about this time that the pretty Noisette Rose was introduced from France, and I perfectly well remember how delighted I was on budding it on standards of the Rosa villosa, called here at that time the "Double Apple Bearing Rose," to find it form fine heads, and bloom most abundantly. By the way, this Apple-bearing Rose, and the Double Sweet Briar, were at, or a little before, the time I am writing about, the only standard Roses in our gardens. I recollect one very old standard of the former which grew in the "front court" here, that measured some sixteen or eighteen inches in circumference of stem, with a large umbrageous head like an orchard Apple tree of twenty years' growth; a heavy fall of snow towards the end of one October, before it had shed its leaves, crushed and ruined it. To return to my standard Noisette Roses: I was never tired of admiring them. To see standard Roses blooming in autumn was something wonderful. It was, I think, this same autumn that I visited the nursery of Messrs. Lee and Kennedy, and there I saw, to my intense admiration, standards of Rosa multiflora, Tea Roses, Moss Roses, and a host of others, mostly summer Roses. These I was told were imported from France; their price was one guinea each. I thought them very cheap, for they appeared to my young eyes rich and rare beyond everything I had ever seen. Soon after this the Rose du Roi, or Crimson Perpetual, or Lee's Perpetual, made its appearance, and also the Palmyre or Blush Perpetual. How they were sought after! for a sweet-smelling Rose blooming in autumn was a prize. Many other Perpetual Roses, so called, were then brought into notice, and then in due course came Madame Laffay, raised by M. Laffay, one of the first and still one of the best of the Hybrid Perpetuals. Soon after this M. Laffay "gained," as they say in France, Prince Albert; this he thought a masterpiece, and accordingly, relying upon its name and quality to give it great

popularity in England, he sent over 400 plants for sale; it bloomed badly and could not be recommended, when it was discovered that it seldom or never opened well, and only 200 plants were sold, much to the disappointment of the raiser. M. Laffay about the same time gave us Dr. Marx, La Reine, Lady Alice Peel, Louis Bonaparte, Comte de Paris, and others, but not one equal to Madame Laffay, taking it all in all. Some four or five years ago he styled himself "Innovator of Roses," meaning, I suppose, that by hybridising he intended to give us some new races of Roses; but I presume he has failed, for of the scores of varieties he has "sent out," as we say in England, or "placed in commerce," as they say in France, of late years, scarcely one in twenty has been found worthy of extensive culture.

Another prolific raiser of new Roses was M. Vibert, now retired from business;* he and his successor, M. Robert, have given to the Rose world new Roses without end—or at least Roses with new names. M. Vibert was one of the first to give us Roses in divisions; we thus, in his catalogue, had three divisions of Perpetual Roses, three of Moss Roses, and three of Provins or Rosa gallica, two of Provence Roses, one of uncertain hybrids—"Hybrides Incertaines"—and so on. These minute differences are, I daresay, very interesting, but not very understandable. It is of more interest, I think, to see an estimate of the Roses gained by MM. Vibert and Robert within the last fifteen or twenty years, and placed in commerce; their price the first year has generally been from fifteen to twenty-five francs each. The following list is as nearly as possible correct.

Family.	Number of Roses.
Rosa alba	4 varieties.
Perpetual and Hybrid Perpetuals	103 do.
Perpetual Moss Roses	24 do.
Summer Moss Roses	84 do.
Damask Roses	20 do.
Cabbage Roses and hybrids	17 do.
Tea-scented Roses	8 do.
Noisette do.	8 do.
Bourbon do.	28 do.
Hybrid China do.	8 do.
Hybrid Noisette do.	10 do.
Hybrid Bourbon do.	9 do.
Provins Roses (Rosa gallica)	78 do.
Provence Roses	39 do.
Uncertain Hybrids	10 do.
	486

* I always feel inclined to excuse M. Vibert for his enthusiasm leading him to send out so many inferior Roses, for the following reason. One fine morning in July, 1842, I was at Angers, when he paid me a visit at my hotel, bringing with him a fine bunch of pale yellow Roses, with which he delighted my eyes; these were blooms of Noisette Solfaterre. Shortly after he took me to his garden, and showed me a yellow Rose still more beautiful; this was Cloth of Gold, glowing in beauty under the brilliant sun of Angers. Let a Rose lover imagine my surprise, my delight. To my great disappointment, this Rose, of which I bought all the plants that could be spared, bloomed in England in 1843 in a very inferior manner, giving blossoms merely of a creamy white; it has since then redeemed its character. It should always be trained to a south or south-west wall, its weak spray cut out, strong shoots encouraged, and those never shortened but trained in a serpentine way to the wall.

Presuming that twenty plants of each were sold the first season, making 9720, at 20 francs each, the profit has not been amiss. Now let us see how many of these 486 varieties are still in estimation, and we shall then see something approaching to the real value of new Roses. Of Rosa alba one; of Perpetuals and Hybrid ditto, four; of Perpetual Moss three, or perhaps four; of Summer Moss Roses, six; of Damask, one; of Cabbage Roses and hybrids, not one; of Tea-scented, two; of Noisette, two, viz., Aimée Vibert and Phaloê; of Bourbon, not one; of Hybrid China, Noisettes, and Bourbons, not one; of Provins four or perhaps five; of uncertain hybrids, one; of Provence two. This latter group was formed by M. Vibert, and answers to our Hybrid Provence Roses, in which this and the hybrid Cabbage Roses of Vibert may safely be included. We have thus about twenty-seven good Roses out of a list of 486, most of which have been sent out within these last few years.

In the autumn of 1853 seventy-three new Roses were sent out, costing 1066 francs;* most of these were Hybrid Perpetuals; out of this batch there are now from seven to ten only that can be honestly recommended. In the autumn of 1854 about sixty new varieties, mostly Hybrid Perpetuals, were also "placed in commerce"; of these about eleven are first-rate varieties, although many of them gave us no new characters as regards colour. In the autumn of 1855 only about fifty new Roses were sent out; of these there are about ten likely to prove worthy of cultivation, but not one offering any new character in colour, as they range for the most part under rose, pale rose, and bright rose; it appears strange that such a waste of names should occur, and that Roses merely pretty, but not different to those we have, should be ushered into the floral world annually. It is, I think, owing to the enthusiasm of the provincial French cultivators; they sow abundance of Rose seed, and when they obtain a pretty Rose they love their own child so dearly, and think of the few hundred francs that may be obtained of their dear friends the English, with so much warmth of feeling, that they cannot resist the temptation of giving it a pretty new name and sending it out; besides this, there is something so seducing in a Rose of one's own raising, and something so lovable in Roses, that I, now a veteran Rose grower, although sorely inconvenienced by having to buy and to prove all the Roses with new names, am quite ready to excuse our floral friends over the water.

It is curious to find how few new Roses have been and are raised from seed in England. The Tea Rose Devoniensis is a splendid exception; but not one good variety of the now justly popular Hybrid Perpetuals has been raised in this country. Messrs. Paul bought the stock of, and imported Victoria, which, although sometimes good, has not turned out well, and two or three others. An unnamed seedling was also presented to the Messrs. Wood by a French florist, and named by them Duchess of Norfolk; it is much to be regretted that this Rose was flattered in the figure taken of it, and still more so in its description as a "climbing Hybrid Perpetual Rose." Rose enthusiasts at once

* Horticulture Francaise.

pictured to themselves the fronts of their houses covered by a climbing Rose like a Rosa sempervirens in habit, giving large double crimson flowers. It is really a nice Rose, with a very moderate degree of vigour in its growth. Williams' Evergreen Climbing Rose has also had a false character. About ten or twelve years since I was walking through the grounds at Pitmaston with the late Mr. Williams, a most ingenious fertiliser, when he pointed out to me a climbing Rose, the result of a cross with the white Ayrshire and the yellow China or Tea Rose; it was growing most luxuriantly, and gave large flimsy flowers of a dirty white. I remember that we both thought it unworthy of cultivation; but soon after his death it came out, and was puffed off as a new and very desirable climbing Rose. All such exaggerations should be discountenanced by English Rose growers.*

Among the new creations, the Perpetual Moss Roses are, I think, most interesting. Only a week or two since I gathered some fine bunches of buds and half open flowers of Salet, a most vigorous growing Rose, and also of Madame Ory; they had the true fragrance of the old Moss Rose, and carried one back to June, thus giving us four Moss-Rose-months instead of barely one. This summer fragrance is so exhilarating, it reminds us so vividly of charming June days in the fickle and often gloomy month of October, that every Rose lover should cultivate a few Perpetual Moss Roses.

The new Roses sent out in 1855 have not cut a brilliant figure this summer. Triomphe de l'Exposition, Arthur de Sansal, Ornement des Jardins, and Triomphe d'Avranches, have bloomed well, and are good Roses. Mathurin Regnier is also likely to prove a fine Rose, without any novelty in colour; but not a new Rose approaches Prince Lêon or Jules Margottin in colour, form, or habit. Lord Raglan has this season been remarkably beautiful, not scorching under a burning sun, and being even more brilliant than the Géant. Victor Trouillard, a new Rose, presented to Messrs. Standish by a florist at Angers, which has been exhibited the past season, is said to be a fine dark Rose; and Bacchus, introduced by Messrs. Paul, has thick shell-like petals, and is likely to prove an acquisition.

There are, I observe, nearly forty new Roses to be sent out this autumn by the French florists; most of these are Hybrid Perpetuals, twenty of which are described as having shades of rose colour, six shades of crimson—three or four of these are seedlings of the Géant. There are also two new Summer Moss Roses by Laffay, both of which are rose coloured, and a new Perpetual Moss by him, described as "rouge vif centre rouge violacé, superbe." Three new Noisette Roses are also offered, one white, another a seedling from Lamarque, "d'un beau jaune canari," another crimson partaking in its habit of the Bourbon family. Three new Tea-scented Roses are to be sent out—their characters as described are an "oft-told tale."

We still lack a fine crimson Tea Rose, a pure white Hybrid Perpetual, a yellow ditto, a good crimson Rosa sempervirens, a yellow

* The figure of the Tea Rose Souvenir d'Elise Vardon, in the *Florist* for last month, is by far too perfect; it rarely gives such a flower.

Moss Rose, and some others, so that there is still a wide field open to Rose growers.

There is one remarkable peculiarity attending the cultivation of Roses; they never seem to fatigue the mind of the amateur; in youth, in the vigour of manhood, and in old age, their cheerful brilliant tints are always grateful, their perfume always exhilarating. I have only remarked a slight drawback; one, after thirty years of admiration, is apt to become fastidious, and to require great perfection in shape, in colour, and in habit. I now scan a new Rose with a most critical eye; at one time a trifling difference in a Rose, if it were a new feature, was hailed with ecstasy; times are now changed,* but then, Roses never were, as far as we know, so beautiful as they are at the present day.

THOS. RIVERS.

The Nurseries, Sawbridgeworth, Oct. 20, 1856.

WILTON PARK, NEAR SALISBURY,

THE SEAT OF THE RIGHT HONOURABLE SIDNEY HERBERT.

THIS noble mansion is situated by the town of Wilton—so notorious in the history of Wiltshire. It is supposed to have been the Caer-Guilon, or chief seat of the British prince Caroilius, and subsequently the capital of the West Saxon dominions. It was a place of considerable importance for some centuries prior to the Norman conquest, and contained several religious establishments, and a mint. From the ninth to the fifteenth century Wilton suffered severely from the wars which raged throughout the country at different times during that period. Notwithstanding many reverses, however, Wilton continued for many centuries after the Conquest famous for its monastic institutions,—particularly its abbey, which was commenced as early as the year 800, and continued to flourish to the dissolution, when it was granted to Sir William Herbert, afterwards Earl of Pembroke. Its buildings, we are told, were of considerable extent and grandeur.

On the site of the celebrated nunnery Sir William Herbert commenced the erection of the present mansion. It was designed by Hans Holbein and Inigo Jones. At the beginning of the present century Mr. James Wyatt was employed to enlarge the building, and adapt it for the better display of its rich stores of ancient sculpture and paintings, the collection of which is very extensive and magnificent. The exterior of the mansion gives an impression of vast dimensions. Three sides of the building are surrounded by pleasure grounds; at the west front is situated a neat Italian garden, from a design, we understand, of the late Countess of Pembroke, who for many years took great interest in gardening. This garden is nearly a square piece of ground, and is intersected in the middle by broad gravel walks;

* Some years ago I received—what I observe is now regarded as new—the green Rose, from France; its petals, or flower leaves, are changed into sepals perfectly scentless. I did not propagate it, not thinking it worthy of cultivation.

parallel with the walks are rows of the Cupressus macrocarpa, which for this style of gardening is exceedingly well adapted. There are also numerous vases and baskets; these are kept filled with a variety of gay flowering plants, which contribute greatly to the good effect of the whole. On the north side of this garden runs a broad gravel walk, considerably elevated above the garden, from which it is divided by a terrace-wall surmounted by vases and statuary. From this part the whole of the garden is under the eye, and presents a very pleasing effect. On the south and east sides of the mansion are also geometrical flower beds, vases, &c., which are kept gay with a variety of choice trees and shrubs. Of Coniferous trees we noticed some fine Deodars, Taxodiums, Araucaria imbricata, Cupressus Lambertiana, &c. There are also some remarkable Cedars of Lebanon,—one, the bole of which measures 23½ feet in circumference, with a fine head in proportion; there are also several others nearly equally large. The pleasure ground is divided from the park by the river Nadder, and from the kitchen garden by the Wily, their confluence being only at a short distance. The Nadder is spanned near the mansion by the Palladium bridge—which is of pure classic design,—and at a short distance another, termed the Image Bridge, leads to the park.

The kitchen garden consists of about four acres of land, surrounded by excellent walls for fruit trees. Apricots and Peaches, although protected when in bloom, are only a thin crop. Plums and Pears are also scarce. Bush Pear trees are grown here extensively; these generally produce large quantities of good fruit: this year, however, as is everywhere the case, the crop is all but a failure. Our visit was in the early part of August: at that time all the trees had been pruned of superfluous wood; by this practice the fruit buds are fully exposed to the sun's light, and the whole energies of the plant are directed to that only which will be of service for another season; this is a practice which cannot be too strongly recommended. In the kitchen garden are numerous houses for Vines, Peaches, and flowering plants. Also some excellent pits, heated by hot water, for Pines, Cucumbers, and Melons. A portion of the Pines was planted out; these, and a quantity of strong plants in pots, were in excellent health.

Of flowering plants large quantities are grown for the decoration of sitting rooms. There are some good stove plants and Heaths, and of Orchids there are many good things; the old Phaius grandiflorus is grown extensively, and as an autumn and winter flowering plant there are few to equal it. We also noticed some fine plants of Dendrobium nobile, D. moniliforme, and D. chrysanthum; Zygopetalum Mackaii, a most beautiful and sweet scented autumnal flower; Cattleya Mossiæ, C. labiata, and C. crispa were also fine plants. Of Lælia superbiens there is a large plant which has flowered annually for several years; we also noticed a few East Indian species, such as Aerides odoratum, Saccolabium guttatum, &c. Those who have been accustomed to see the South American Orchids grown in a high temperature would, we think, be surprised to see the luxuriance of the plants in question; they were standing in Vineries in which was a quantity of ripe Grapes: consequently they were exposed to currents of air both day and night.

The whole is under the management of Mr. Brown, whose na
frequently mentioned as a successful competitor at the Salisb
other flower shows, and who for very many years has supe
this beautiful place.

THE DAHLIAS OF 1855.

In our number for January we gave a tabular list of
then about to be sent out. The list was supplied by
amateur growers of the Dahlia, and certainly compris
but by no means placed in the order of merit w
them, after the experience of another season. Tw
enumerated, at the head of which stood Bessie.
rather uncertain, yet when in good condition is
beautiful model.

If we were to collect the opinions of the le
would most certainly head the list, its freenes
pleased every one.

TWELVE OF THE B

AS GIVEN IN JANUARY.

1. Bessie
2. Perfection
3. Mrs. Wheeler
4. Miss B. Coutts
5. Lollipop
6. Lord Palmerston
7. Duchess of Wellington
8. Yellow Beauty
9. Grand Sultan
10. Shaded Model
11. Eclipse
12. Colonel Windham

AS THE

Constancy has so much to do wit
it will in a great measure accoun
place in the position some of the n
last year. Perfection, like Bessie,
caught, it has been late, and a lit
it should be planted early, and
fine; so also has Grand Sultan,
the list, yet it was be for the
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good form. Mrs. Wheeler has been very uncertain, and like its parent the Duke of Wellington it should be grown in poor soil and disbudded sparingly, but it has been much finer in the midland counties than in the south. Among the twenty varieties given last January are Corsair, Chameleon, Magnet, Reginald, and Lady Raglan that we shall not grow again.

The fancy varieties sent out last spring were nearly a failure. Magician, a continental production, is one of the best. Florence Nightingale is good also, but uncertain. Inimitable and Enchantress have been exhibited in the winning stands, and are very useful varieties. Mrs. Spary has also been exhibited, but is not a first-class flower.

THE WAR OF THE ROSES.

I HAD returned, after a long day among the partridges, to that which every Englishman considers the natural sequence of his sport—a good dinner; my dessert was on the table; my legs, I am ashamed to say, were on that vacant chair, which some day, I trust, being a bachelor, may be more worthily occupied; and in my hand I held, dearer to me than wine or walnuts, "A Catalogue of Roses, by Thomas Rivers, for 1856-7." The Turnips that day had strikingly resembled the Rose immortalised by Cowper, and which I have always regarded as the most uncomfortable present, being in a dripping state, which "Mary" could possibly have offered. The clay, too, had been particularly adhesive, and I remember that when I came to the "select Noisette" I took a bumper of sherry, and felt that nothing but love among the Roses could have kept me so long awake. Suddenly, but without surprise (who ever was surprised in that land of dreams, wherein I myself have met, without perturbation, Hercules, Fieschi, and Dick Turpin?) I found myself in my Rose-garden. It was broad daylight, and every Rose in bloom. Kean was as glorious in October as his namesake in the "Winter's Tale." General Jacqueminot, H.C., with the fair, ladylike Triomphe de Bayeux by his side (why do not Rose-growers cultivate more generally this distinct and elegant variety?), was glancing gloomily at his rival synonyme, who shone gloriously among the Hybrid Perpetuals. Paul Ricaut bent tenderly over Coupe d'Hebé, and swore that Auguste Mie was coarse and colourless in comparison. But while these summer Roses seemed only interested in their own private affairs, among the autumnal bloomers there was evidently some great topic of public import. I soon discovered that the subject of discussion was the Catalogue I had just been perusing, for it was strewed over the Rose-garden, so that the dwarfest might read, and suspended to the tallest *pillars*, so that the highest standard might see. The Duchess of Sutherland having been requested to preside, the business of the meeting commenced. Her Grace began by remarking that she never remembered, since she had been a Rose, to have been agitated by more painful feelings, or to have realised more sorrowfully the old adage—"No Rose without a thorn." ("Oh, oh,"

from Inermis). They had always regarded Mr. Rivers's Catalogue with as much reverence as a Roman Catholic could feel on receiving a letter from the Pope—("Hear, hear," from Pius the Ninth)—for he was indeed the *Papa* or Father of Roses; and they had looked for its appearance as anxiously as young ladies awaiting *les modes* from Paris, for Mr. R. was their *arbiter elegantiarum*, and set the fashion in Roses. Now, for the first time, the publication had been received by certain malcontents with evident disrespect, and not satisfied with expressing their complaints *sub rosa*, they had summoned a general meeting. She called upon them to come forward and state their grievances, that the case might be fully discussed.

Madame Guinoisseau, H.P., then gracefully rose, and a general murmur of admiration followed among the Field Marshals, Generals, Colonels, and other gentlemen present, as also from the Emperor Napoleon himself. She felt, in common with every Rose that bloomed, nothing but love and respect for dear Mr. Rivers: still she thought he had not done her justice. Let them recall her history, and judge. She arrived in that garden in November last, and, though a perfect stranger, had experienced a most gratifying reception, being placed in a most agreeable locality and fed upon a most liberal diet. She had done her best, in consequence, to give satisfaction, and had good reason to be proud of her success. One morning, towards the end of June, the master came his usual round. She well remembered watching him as he passed from one tree to another, and the feeling of envy which shot through every petal as he lingered with Madame Rivers. He was hurrying past, as though expecting to find no beauty there, when her first full bloom, on which she had bestowed immense pains, and which really was (to quote the complimentary language of Mr. Lane and Mr. Paul,) "beautifully cupped," "large and double," suddenly caught his eye, and she saw him actually start. Then he drew near admiringly, gently moved the flower into the light most favourable to its best display, and gazed, with the happy smile of a true florist, long and fondly,

> "As though within the petals of a Rose
> A sleeping Love he spied."

Suddenly, and to her great surprise, he rushed away, and darted from the Rose-garden; but soon returned, to put an end to her suspense, and bringing with him their respected guardian, Mr. Hirst. Never, never should she forget her happiness, when, pointing to her, he had said, in a joyous and exulting tone—"There, gardener, there *is* a Rose!" Well, the very next morning, just as they were waking, "with their rosy faces washed with dew," she was severed from the parent tree, and found herself reposing on some fresh green moss, and in the society of twenty-three other Roses, the most beautiful she had ever seen. For a time they were kept in darkness, and so travelled many miles, being at last brought to light in a spacious hall, and placed among some hundreds of other Roses, collected and arranged like themselves. By-and-by, three shrewd and thoughtful-looking men approached them, and she was informed, in a whisper, by Mr. Paul Ricaut, who had been in the habit of attending similar exhibitions ever

since he could remember, that these were the judges. They stayed long with some of the groups, making notes, and examining every flower, but at some they gave but a momentary glance, just shook the head and passed. Arriving where she was they smiled most graciously, and she was feeling particularly proud and delighted, when suddenly one of the triumvirate abruptly seized her by the neck, and, lifting her from her zinc tube, exclaimed—"Hollo! what have we here?"—"New to me," said No. 2, "but evidently good; shape perfect; colour novel, most delicate, and beautiful."—"Why she has petals enough for two Roses," quoth No. 3; "she's a gem, and no mistake." Back she went to her place, and on went the judicial trio. Again they took a general survey, again paid us a visit, and finally placed before us, to our unbounded joy, a large ornamental card, whereon was printed, "*First Prize.*" (Loud cheers from all parts of the Rosarium, the successful competitors colouring and blushing, and some turning quite pale with emotion.) She would not indulge in further eulogy of self, but would content herself with stating that, on two subsequent occasions, she had been equally "victorious, happy, and glorious" as on her first *debut*. Had she not, then, just cause for dissatisfaction, when she found herself classified by Mr. Rivers among Roses "not quite first-rate," merely described as "bright rose," and valued at one-and-sixpence? (Cheers and tears.)

Alphonse de Lamartine might not possess those charms and graces which beautified the last speaker, but she had been thrice successfully exhibited in her society; more than one judge had pointed to her and said that she was "the shape they wanted;" Mr. Lane had kindly said that she was "globular, and very pretty;" Mr. Paul considered her to possess a "fine form, large and full;" she had been called "a duck," "a pet," "a love," and "a darling," by hundreds of young ladies, while scores of gentlemen had pronounced her to be "a stunner," "a tidyish flower, &c.;" she was a great favourite with her master, who had budded her in a most ample and complimentary manner; and she therefore did not see why she was to be degraded by Mr. Rivers; she would not endure it—no, that she would not; and if he came within reach of her thorns, she had a great mind to scratch his eyes out.

Miss Naomi would say that a more industrious, steady, little rose than herself did not grow in that garden. Now was she not most regular in her habits, punctual in blooming, abundant in flowers of never-varying fulness and beauty? Was she not nearly related to, and considered very closely to resemble, the distinguished Duchess in the chair? What *had* she done to offend Mr. Rivers?

Madame Lamoriciere would like to be informed what Mr. Rivers wanted. She knew that she was a little uncertain, but it was the privilege of her sex to be so, and Mr. Rivers ought to be the last to complain on that subject, for she had no hesitation in saying that he himself was a regular flirt. He had said once upon a time that her "shape" was "exquisite," and now he had deserted her for newer charms, and had nothing to say for her except that she was "bright pink." ("Shame! shame!" from all the ladies.)

William Jesse would be blowed—("Order! order!")—that is, he

would be blowed in a floral sense, if he stood that sort of thing any longer. Mr. Rivers had said that he was "certainly one of the most beautiful large Roses in existence," and now he had put him in the awkward squad. He knew that he was getting old and could not stand moving about to shows, but he was not afraid of comparison with many modern upstarts; and as for that brute Beranger, who had usurped his place in Class 1, he would fight him any day in the week for a gallon of liquid manure. (Loud cries of "Order.") He would back the four Roses who had just sat down against many who had been promoted to the first division. He did not wish to speak disrespectfully of the fair sex, but he would put it to the meeting whether Miss Alexandrine Bachmeteff had a *green eye* or not? The Duchess of Norfolk must excuse him for saying that he did not think much of her shape. General Jacqueminot wore a gorgeous uniform, but he wanted padding —there was nothing of him. He had lived for two years next door to Gloire de France, and had not seen a good bloom yet. As for La Reine and Madame Campbell d'Islay, he would only say that in the Midland Counties they were coarse, vulgar Roses. Madame Fremion was pretty, but too slight and slim for his taste. He had seen good blooms of Paul Dupuy, but the generality showed "an eye." As for Prince Chipetouzikoff, in his opinion he was as hollow as a drum. He should move that their mutual friend, the gardener, be requested to light his pipe with "A Descriptive Catalogue of selected Roses," by Mr. Thomas Rivers. ("No, no," and general disapprobation.)

Devoniensis then rose in all her beauty, and so delicious a perfume filled the incensed air, that it did seem almost possible to

"Die of a Rose in aromatic pain."

She was received and heard with the most profound respect and admiration. She said that as an English Rose, born on English ground—("Hear, hear," from George the Fourth, H. C.)—she felt bound to notice the aspersions which had been cast upon the great English Rose-grower. And first of all she would ask them one simple question—"Who reinstated the Rose, as the queen of flowers, in this country?" (Loud cries of "Mr. Rivers," and "We love him," from the ladies, during which Madame Laffay and some other elderly Roses were removed in a fainting state.) Let them not forget their debt of gratitude. Nor should they forget how he, their founder and benefactor, had, with unvarying consistency, rejected from his catalogue those countless impostors who had come of late years from France to deceive the English public. There were not more Hybrid Perpetuals in this year's list than in the last; five had retired, and five had been promoted to succeed them. Was it not an error in the right direction, if Mr. Rivers had pruned with a somewhat too trenchant blade? She thought, with all deference, that he had done so. She thought that the first four Roses who had spoken (and she would add the name of Mr. Joseph Decaisne, whose silence did him credit), certainly ought to be in the first class. But she would remind them that they were distant many a long mile from Sawbridgeworth, and that in different soils and situations the same Rose presented very different aspects.

She believed that if Mr. Rivers had seen the complainants as they bloomed there in the summer, he would have declared them to be "quite first-rate;" and she was equally confident that if Mr. Jesse had seen at Sawbridgeworth those Roses which he had attempted to blight, he would have refrained from uttering his calumnies. Furthermore, Mr. Rivers had told them, "every Rose has its season;" and some of them might find themselves in 1857 unable to maintain the position they had obtained in 1856. At all events, let them rest assured that to merit, true and lasting, justice must be done; and that Mr. Rivers would be the first to acknowledge their excellence, when fairly and fully proven. No really good Rose need fear the aphis of jealousy, or the mildew of ignorance!

This speech was received with general applause, during which the previous dissentients rose *en masse*, and expressed their perfect readiness to abide the test of time (with the exception of Mr. William Jesse, who seemed to have taken a dew-drop or two too much, and to be particularly "cupped").

All was now *couleur de Rose*, and while three cheers were given for Mr. Rivers, I awoke to finish my sherry.

S. R. H.

NOTES ON THE MONTH.

RAIN and fog, with tremendous storms, and a few intervening fine days, characterise October. On some days, as the 18th, 20th, and 21st, there was a delicious softness in the atmosphere, seldom experienced in the North Midland Counties; these quiet days, with not a breath of air to move even a ripple on the water, and cheered with a brilliant sun (whose rays, however, were softened down by the large quantity of moisture in the air) are a real luxury to enjoy. To lovers of country life, there are, in our opinion, no such enjoyable days as are met with now and then in October. English landscape, too green and monotonous during summer, now comes out in grand relief. The gray stubbles mix well in the distance with pastures, themselves become of a more sober colour; and both are heightened by the many-coloured tints of our woods and hedgerow trees. Horse Chestnuts, Beech, Mountain Ash, Maples, Liquidamber, Sumachs, and some kinds of Oaks, present to our view, at this season, grand masses of colour, varying from a deep orange to brown and crimson, which change as the season advances, and contrast strikingly with the common Oak and Elm, which retain the verdure of their foliage longer. Would that our plantation makers had a painter's eye for warm colours; we might then hope they would throw more of it into their woods, and make our autumn landscapes more generally beautiful even than they are now. That a certain amount of moisture in the air is favourable for conveying odours, we are agreeably reminded on such days as I have been describing, by the balmy fragrance floating in the air whenever we neared a garden containing Mignonette, Stocks, &c. Oh! thought we, if ever a subscription is started to sow every bald patch of ground by

the wayside, and every spare nook in each garden which borders our public roads, with Mignonette and Wallflower, our guinea will be forthcoming for the purpose. We might go even further, and ask our great railway contractors whether they could not accommodate us with a strip on their railway embankments, to allow us a fragrant sniff of our favourites when travelling by rail.

But we must be practical, or our readers will say—*Cui bono?* Well, then, to resume. The heavy rains and gloomy sky of the last two months make the gardener feel a little uncomfortable about his fruit trees, particularly those on his walls. With little or no crop on them this season to moderate their growth, the late weather has pushed them into a rank luxuriance, and Peaches and Apricots look as green and vigorous as they did in July. The immature ripening of the wood will induce gum next spring, imperfectly formed fruit-buds, and consequently the prospects next season become a piece of speculation, with the odds ruling against anything like a crop; the case is a desperate one, but, at all risks, where it can be done, let the trees have the earth taken from their roots and be partially lifted; it will check further growth, and should the weather become dry in November, the trees will give off a good deal of the moisture in them by evaporation, which will help to ripen the wood.

An excellent time this for planting all kinds of trees; do not puddle them in, nor yet allow their roots to be exposed to the air a minute longer than is needed. If you have them from a nursery, give a trifle more than the regular price to have them carefully lifted, with their roots nearly entire and not docked off to within an inch or two of the stem, as is the usual practice. Never buy a tree in a pot, if more than two years old—an old-fashioned lazy habit that, of keeping plants for years in pots; let nurserymen plant them out in a poor soil if they find them getting too large, and transplant them yearly, when they will do buyer and seller alike credit; but a tree in a pot, older than two or three years, is useless; when nurserymen find their customers get wise, they will learn wisdom themselves. The discussion about flower-garden arrangements, now so much the vogue, gets monotonous; nothing new is enunciated; the subject, in fact, is used up. We should like to see a garden—a geometrical one, if you like—planted entirely with shrubs all evergreen, or partly mixed—coloured beds might be worked up with variegated-leaved plants, and others with various tints of green. Hollies, Pernettyas, Arbutus, Hederas, Sydonias, Garryas, Viburnums, Phillyreas, Rhododendrons, Andromedas, and other American plants, hardy Heaths, &c., &c, kept within certain limits as to height, might form the masses; while, for points of relief, or axes to balance the groups, Junipers, Arbor Vitæ, and Cypresses, should be introduced; Savin, Heaths, Cotoneasters, Periwinkles, Polygala Chamæbuxus, &c., might form edgings; if colour were wanted in the autumn plant the dwarf beds with late-blooming Gladioluses, Tritonias, &c., when the flowers would show well above the foliage of the shrubs: this, however, would be rather foreign to our scheme, and we name it, as we saw lately in Paris how extensively they use the common Asparagus in filling up the bottom of their beds of Lilies and Gladiolus, with the best effect. We

should be disposed to back a garden of this sort, if well carried out, against the best parterre-work out. At any rate, it would be a distinct feature in gardening, and we hope some of our great patrons—as Lord Stamford or Sir William Middleton—will take the matter up. Should they do so—so fickle is fashion, and so imitative—we should soon hear of nothing else.

G. F.

NEW GRAPE.

Mr. Fleming, of Trentham, has forwarded for our examination his new Black Grape, in reference to which he informs us "that it ranks with any Black Grape we possess, and in many respects is better—it ripens as early as the Black Hamburgh, and keeps longer; has a higher flavour than the Hamburgh, and a very thin skin." Mr. F. further informs us, "that with good cultivation the berries attain the size of the White Muscat; that it sets very freely, and is a most prolific bearer: the leaves are of a dark green, below medium size, bluntly lobed, and of a thick texture, which enables it to withstand the hottest sun without scorching."

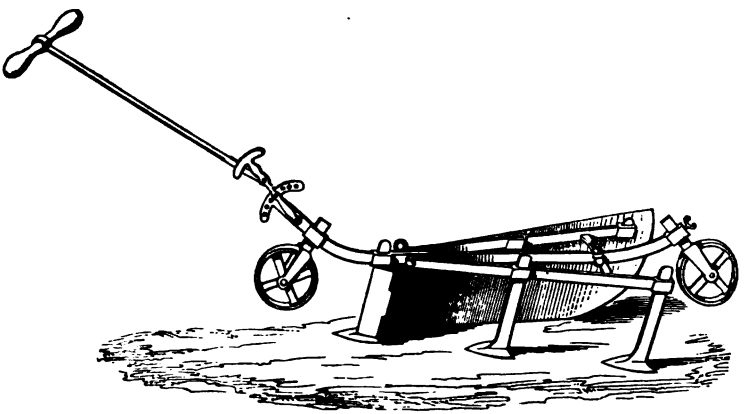
The berries of Mr. Fleming's Grape are oval, of a deep purple black, covered with bloom; each berry has one and sometimes two stones; flavour very rich, sweet, and vinous, with a thin skin and abundant juice. Taking all its good qualities into consideration, this will prove a very valuable late Grape.

NEW INVENTIONS, &c.

Mr. Thomson, of Dalkeith Park, has sent us a prospectus of a new form of boiler he has designed for heating hothouses, &c. This he calls his retort boiler, and they are made of two sizes—the single and triple retort; the latter, Mr. Thomson states, is capable of heating 3,000 feet of four-inch pipe. The single retort is of the usual cylinder form, the fire being beneath the boiler, and acts round its outer surface first. The flame is then returned through the centre of the boiler (which we consider important); consequently, as the draught is at a point *within* the radius of the flame acting round the boiler, it is kept in close contact with its outer surface, and has not so great a tendency to rise and waste its power on the upper surface of brick-work. This is, in our opinion, an improvement; as is also the facility with which the central tube can be cleaned. We have not, however, ourselves, yet seen the boiler at work, but report speaks highly of it. The triple retort works in the same manner, and is, in fact, merely three cylinders connected together.

A NEW GARDEN IMPLEMENT.

RECENTLY, at Edinburgh, we saw in operation an implement which combines the advantages of the hoe on an extensive scale, a harrow, a grubber or fork, and a plough, or, rather, a machine for earthing up Potatoes, &c.—all this in one, and easily worked by one person. Of its great utility we cannot possibly speak too highly, and to market gardeners especially, and in those establishments where kitchen-gardening is carried on extensively, it will be most valuable. The inventor of this *multum in parvo* instrument is C. K. Sivewright, Esq., of Cargilfield, Edinburgh, who had it tested in the presence of a few who are interested in horticultural pursuits. A sketch of this implement was given in the *Gardeners' Chronicle* for 1849, page 500, and by permission of the proprietors of that journal we are enabled to reproduce it. Its cost, we believe, is about £4. The implement is so



constructed that it can be used with five hoes or cutters, and by means of a simple contrivance it can be extended or reduced to a width of from twelve inches to two feet. By removing the cutters and inserting iron teeth about eight inches in length, it can be made to answer the purpose of a fork; and by moving these and placing side knives in the form of a plough, ridges can be thrown up with great ease. We were told that the saving of labour with one of these implements was very great, one man doing easily and most effectively the work of four; indeed, we are quite convinced that it is of great practical utility in the culture of Turnips, Cabbage, and other green crops. The drawing given above represents the machine as at first constructed; some alterations and improvements have been made since that time. Should any correspondent wish for further information respecting it, we shall be happy to apply to Mr. Sivewright for it.

NORTHERN ESTIMATE OF SEEDLING DAHLIAS.

At the conclusion of the meeting of the National Floricultural Society of the 18th September, a box of 24 Dahlia blooms was sent off to Edinburgh for the inspection of such of our northern friends as were within reach of that City. The blooms could not, of course, be seen in the freshness that surrounded them at Regent-street, and many were much injured by the long journey. The following remarks are furnished by the gentlemen whose names are attached, and as they are known to be among the best cultivators of this popular flower in the North, their opinion will, we are sure, be of value to the growers in the Northern and Midland districts.

Midnight (Fellowes).—A beautiful dark shaded flower, of first-rate outline and immense depth of petal. We venture to predict that this variety will be found in all good winning stands for many years to come.

Lady Popham (Turner).—A white flower slightly tipped with delicate rose. A fine and well built flower; very deep and symmetrical, with well rounded shoulder and high centre. A great acquisition; first-rate in every respect.

Marion (Fellowes).—Another gem in the *Fanny Keynes* class and style, but much whiter, and more clear in the ground colour; also brighter in the tipping; to all appearance not difficult to get up in the centre; good size; form first-rate. A fine companion to *Lady Popham.*

Charley Self (Keynes).—A dark maroon, shaded with crimson purple. In the way of *Grand Sultan,* but finer in form than that flower usually is, being high built, with very fine centre. [This variety is a sport from *Charles Perry* (Keynes), a fancy flower elsewhere noted.—Ed.]

Cherub (Holmes).—Light orange. A full sized high built flower; good in form, colour very attractive.

Mrs. Critchett (Rawlings).—Buff. Seemingly a very promising flower, but did not arrive in a state which would enable us to judge decidedly of its merits; the flower sent was rather young and undeveloped, also it was damaged in carriage.

Harbinger (Holmes).—Very bright scarlet, in the way of *Sir C. Napier,* with a better petal. Size medium, form good, centre very prominent.

Mont Blanc (Fellowes).—A very promising white flower, with good petal and close centre, bloom too young, however, and damaged in carriage.

Mrs. Edwards (Keynes).—Clear lilac petal, but so much damaged we could not judge of the form.

Touchstone.—Light purple. Fine petal and outline, but this also was very much damaged.

Francis (Grant).—Fiery red, with clear white tip; very distinct; form good, size medium.

Charles Perry (Keynes).—Rosy purple, striped and suffused with maroon; novel and attractive.

Conqueror (Keynes).—Rosy lilac striped with black; distinct and good.

Lady Paxton (Keynes).—Red, tipped with white; same class as *Miss Frampton*.

Cleopatra (Salter).—Yellowish orange, striped and spotted with red; good flower, and attractive.

In addition to the above there were some fine blooms of older varieties. The finest were *Colonel Windham*, *Captain Ingram*, and a noble bloom of *Yellow Beauty*—on the whole decidedly the best yellow to grow (*Bessie* being so hard to get). *Pre-eminent* also and *Grand Sultan* were finer than we had before seen them. The Fancies suffered more in carriage on the whole than the selfs; this is the cause of the report on the former not being so full as it would otherwise have been.

(*Signed*) JOHN DOWNIE,
JOHN LAMONT,
Sept. 20th. C. K. SIVEWRIGHT.

HINTS ON LANDSCAPE GARDENING.

As I fear the principles which should be the groundwork of all attempts to adjust the grounds and scenery in connexion with country residences, however humble, are either imperfectly understood or rarely acted upon, I send you a few observations as they occur to me, in reference to this subject, considering your very useful Magazine a suitable channel for allowing my own views on this important department of rural affairs to drift under the notice of your readers; and with some hopes that the question may be taken up by others of your correspondents for mutual discussion. Unprofessionally connected with the subject myself, excepting as having had to deal with the remodelling of three places in the country where I have been located, I have nevertheless been a pretty close observer of the glaring faults in taste and composition which are committed even by gentlemen of admitted authority on matters connected with other branches of the fine arts, and therefore presume either inattention to a few general principles, or ignorance of what constitutes good taste, prevails to a great extent. As a proof of this rather sweeping assertion, we have only to notice, when on a tour through country places, the want of congruity and true taste in composition, in the grounds adjoining the residences of many of our clergy, the villas of retired merchants, and the more ambitious seats of country gentlemen, and they will, I feel assured, be satisfied there is a wide field for improvement in all.

Previous to noticing what is doing in our own day, it may not be out of place briefly to comment on the labours of those who have gone before, but whose works nevertheless remain, as the touchstone of their capacity for composing garden scenery, or for embellishing on a wider scale the parks and domains of landed proprietors. A long array of names is now before us of those who have contributed to build up our fame, or afford a theme for censure. Statesmen and philosophers, poets and novelists, painters and sculptors, landscape gardeners proper,

and garden architects, with practical gardeners and nurserymen, have all lent a helping hand for nearly two centuries in producing the different kinds of scenery which prevail in English gardens at the present time. But alas! when we come to analyse with the eye of taste much that has been thus done, by way of improving the beauties of natural scenery, or of harmonising the various details of planting and architectural accessories, with the mansion belonging to them, the conviction forced upon the mind has a fault-finding tendency, and the exclamation made by the wise king of Israel, when in later life he reviewed his own painstaking and multifarious labours—conceived, as he thought, in much wisdom, and carried on with much discernment—that they were only "vexation of spirit," applies with equal force to much of what we have under review at the present time.

But I fear this unsatisfactory state of things is likely to linger yet longer with us; we have not yet attained a position, or even come near it, when perfection will be the rule and fault the exception, both in architecture and in landscape gardening, as many modern buildings inform us rather painfully. It behoves us, then, to criticise our position, and by public discussion try to ascertain how far the true principles of taste pervade society, and whether or not it cannot be brought up to a point sufficiently advanced to enable us to entertain correct impressions of what landscape composition should be, as well as architecture, so as to judge of their respective merits.

From the bowling green of the olden time, garnished with quaint devices in vegetable sculpture, with its border of herbs and antique arbour, down to the latest attempt at high art in gardening as exemplified in the Crystal Palace, a wide scope of ideas has emanated from the mind of man, and have been put in practice for beautifying and adorning his residence. Fashion has rung her ever-varying round of change with this as with other subjects, and although almost foreign to the object I started with, to discuss things as they are rather than criticise what has been, it will not take long to notice the different peculiarities belonging to the period named above, beyond which all is conjecture and doubt, from more modern improvements having obliterated nearly all traces of the past.

M. A. S.

(To be continued.)

DIOSCOREA BATATAS.

We do not know how far this plant, about which so much was said 18 months back, as a substitute for the Potato, may answer the high character given it for an esculent; but one thing is certain, it is a very ornamental climbing plant, and as such may prove useful in more ways than one—for covering arbours, trellis, and walls, there is scarcely a plant grown for the purpose which has such beautiful foliage as the "Chinese Potato"; while its habit of growth is both graceful and elegant. In addition, therefore, to its producing a root of more or less value for culinary uses, it will prove very ornamental as a climber, where beautiful foliage is an object. S.

AMERICAN NURSERIES.

As many gardeners annually emigrate to America, and as our intercourse with that great country is daily on the increase, the following notice of one of its nurseries, taken from the "*Highland* (Newburgh) *Courier*," may not be uninteresting to some of our readers. "The Highland Nurseries are at Newburgh, a town on the Hudson river, about 60 miles from New York. Passing from the Western Avenue along Liberty Street, the distance of one good, round, plump mile, the seeker for the attractive and interesting features of our hill side town arrives at the beautiful nursery grounds of A. Saul & Co. When he reaches these nurseries, if he in the least admires the triumphs of floral, horticultural, and arboricultural science, he will enter the grounds and feast his ideality upon the productions of elaborated and *nursed* nature. The profusion of the rare and useful in the fanciful and useful departments of the flower, plant, and tree kingdoms will afford him ample opportunities for absorbing study and elevating contemplation. Here he will feast his eyes upon the choicest gems of flowers, there he will gaze delighted upon exotic and indigenous ornamental trees and delicate shrubs, while on every hand the food-bearing plant and the sustenance-giving tree multiplied by thousands, covering fruitful and highly cultivated acres will lead him to reflect upon the bounteous provision which Nature has made for the unceasing wants of her carefully protected children.

"The nurseries of A. Saul & Co. are well worthy of a visit. They are the best arranged and most extensive of anything of the kind we ever saw. They are fastidiously and neatly worked; science and art have been the designers, and architects, and the workers on these premises. One hour's examination of the specimens is worth more to the student of botany than weeks of plodding and painful research into the text books of our schools. One inspection of these nurseries is worth more to the progressive farmer than the reading of agricultural periodicals for years.

"For the present we will give only a few remarks descriptive of these nurseries. In extent they are 43 acres. In variety they present every specimen that can be required by a community; and much more, for scarcely a beautiful flower, a fancy shrub, or an adorning or a fruit tree, or a valuable vegetable can be mentioned which these enterprising men have not now growing on their domains.

"As you approach the residence of Mr. Saul you see a fine carriage-way running from the street to the western extremity of the nursery grounds. Coming to the dwelling of the proprietor, on each side of the road are borders containing an almost infinite number of specimen shrubs. The way proceeding to the west, after leaving the house, is bordered by specimen Pear trees, the specimens numbering 1000. Last year this gentleman exhibited at the State Fair, and at the Fair at the Crystal Palace, 125 varieties of Pears, and took the premium at each exhibition. Around the house are specimens of shade and ornamental trees. Among these, pre-eminent for their fine growth and splendid appearance, are the Norway Fir and the Austrian Pine. Mr. Saul informed us that these trees are better adapted to our climate than any others, either native or imported. These trees being so well

calculated to endure the frigidness of our winters, and at the same time so surpassing lovely, must ere long be much sought for.

"From Mr. Saul we learned a most singular fact in arborary history. Many trees taken from a high southern latitude can endure the extremes of our climate, and thrive better than those taken from a latitude as far north as our own. He has in his nursery several kinds which are indigenous to the Andes of South America and the Himalayas of Asia, and which thrive exceedingly well; while other kinds taken from California and other places farther north can scarcely be acclimated. This he accounts for, in the elevation of the soil in which they grew, the peculiar condition of the atmosphere and the universal hardness and firm texture of the trees and plants which are natives of the region in which they are found.

"An India Rubber tree, which he has reared in a greenhouse, we regarded here as a great curiosity. These trees require much warmth, yet are quite easily kept alive. It, when cut into, sends out a juice much like our common milk weed, which soon dries and assumes a sticky and elastic nature.

"During each of the past two years there have been imported into the nursery 100,000 Norway Firs; 50,000 Quince stocks are annually put out in the grounds for the purpose of improving the quality of Pears by engrafting, and every other kind of fruit trees proportionally. We have not the exact statistics, but we are within bounds in giving the number of varieties of Apple trees at 500, the Plums at 100, and Apricots at 50, and the number of fruit trees now ready for setting out at 500,000. Last year there were fruited here 200 kinds of Pears.

"It does the olfactory nerves of one good to enter his Rose grounds—they cover nearly an acre—half an acre of them lie in a body. The fragrance arising from such a mass of Roses is enough to breathe sweetness over the entire village.

"The varieties of ornamental trees, shrubs, Vines, and plants amount to 1000 at least; but as a mere bare description of this nursery would fill columns, we will let this suffice for the present."

A FEW WORDS ABOUT ORCHARD HOUSES.

I READ with much interest your notice of Mr. Rivers's Nursery, Sawbridgeworth, in the last number of the *Florist*, but I was not interested with your account of the Orchard-house.

Nearly at the commencement of your article you say that "The cultivation of fruit trees in pots dates back but a short period, and has grown up, as it were, from our unfavourable springs of late having rendered out-door crops of wall-fruit very precarious. But, unquestionably, the impulse given to the erection of glass buildings of this description must be attributed to the removal of the duty on glass, which enables this useful article now to be purchased at a cheap rate." And a little further, you say that "We have at all times strenuously urged that orchard-houses are a valuable auxiliary even to good gardens, and in our opinion indispensable in exposed and cold

situations." That orchard-houses are a valuable auxiliary to good gardens, I am fully persuaded; but then they must be very different structures from Mr. Rivers's glass roofs, resting on posts, and the spaces between filled in with Arbor-vitæ, &c.; or even from his more recently erected ones with wood shutters, &c.

Mr. Rivers claims to be considered the poor amateur's friend. He wishes to furnish the man of small income with all the dainty kinds of fruit, and to supply which very large and costly establishments are supported by many of our aristocracy. This is a very praiseworthy motive; but, with all due deference to Mr. Rivers, I cannot see how his orchard-houses will ever realise it.

I should very much like to hear your opinion on fruit-trees in pots; as to whether there is any real economy, or any decided advantage, in growing them in pots to planting them in borders of soil. This is a point which should be settled at once; and it is to such practical men as yourself that the public look for the solution of such questions.

From my own experience, I know that the cultivation of fruit-trees in pots is attended with an immense deal of labour; and so will any amateur, however enthusiastic he may be, find it, if he has all the work to do himself. Even Mr. Rivers finds it necessary to place the pots his trees are growing in on a bed of soil for the roots to penetrate into it, and this notwithstanding his liberal doses of liquid manure.

Then why not, I ask, plant them in the soil, and be done with all the trouble of cutting off the roots, and placing fresh soil for them to strike into every year? I know what Mr. Rivers has said in favour of growing the trees in pots, but I cannot see there is any advantage in the system to the fruit-grower; whilst I can see a very serious objection to it, namely—that for pot-culture a much greater number of trees will be required for an orchard-house than when the trees are planted out in borders, and consequently the nurseryman's bill will be so much larger. This is a matter of vast importance to the poor amateur, whom Mr. Rivers, with his cheap houses, wishes to befriend. I merely make this remark in support of the view I take of the subject, without intending any offence to Mr. Rivers or any other person. It has been said that by having fruit-trees in pots we can have a greater variety of fruit, and for a greater length of time. I admit that we can have a greater variety of fruit, but I am not quite so certain that we can have them for any greater length of time. One good tree in a border will bear as many fruit as six trees in pots, and consequently will furnish fruit for the dessert for as long a time as the six trees in pots, and with a proper selection of sorts the time might be equally long. From my own experience, I know that twenty trees planted in a border will bear more fine fruit than sixty trees in pots in an orchard-house of the same size.

But some may urge it as an objection that trees planted out will soon get too large for any ordinary orchard-house. To this I say no, with root-pruning and proper management.

There is, however, one very great advantage to be gained in growing fruit-trees in pots in orchard-houses, namely—for proving NEW kinds of fruit. This is their legitimate purpose, and to this they should be confined. This is a nurseryman's business, and to this they should con-

fine themselves, and not attempt to teach practical gardeners what they themselves do not understand. Mr. Rivers erred in going beyond this. The horticultural world is much indebted to him for having originated so easy a means of proving foreign varieties of fruits, &c.

Glass is now cheap enough, consequently good houses can be put up at a very moderate price. I am as great an advocate for orchard-houses as Mr. Rivers, but I would have them well built. I would have them span-roofed, with glass at the sides. I would have them well ventilated, and heated by hot water. To attempt to grow Grapes in span-roofed houses not heated will end in disappointment. When orchard-houses are heated with hot water, Vines can be grown up the rafters, and every other kind of fruit can be grown from trees planted in the inside borders. A house of this description, in the hands of a practical man, will *pay*, which is more than one of Mr. Rivers's houses will do in the hands of an amateur.

POMONA.

ON THE CULTIVATION OF THE PELARGONIUM.

THE following brief remarks, which are seasonable, we extract from a paper on the cultivation of the Pelargonium, issued with Mr. Turner's Catalogue, from the Royal Nursery, Slough.

"The successful cultivation of the Pelargonium very much depends upon its treatment in the autumn: it is not possible to have fine plants in bloom in May or June unless due attention has been paid to them in the previous autumn. This is especially the case with young plants; they should have prompt and constant attention and every assistance that they can have from the moment they are struck. Any delay in potting when needed, allowing them to be a prey to aphides, or neglect in any particular, will surely tell injuriously upon the bloom. The following hints are therefore offered in reference more especially to new plants from the nurseries. First, as soon as the plants are received (and the earlier they are received the better) let them be made as clean as possible; stir the surface of the soil a little, and place them in a light airy situation to recover the effects of the journey: two or three days will generally be sufficient for this. Then examine the roots, and, if needed (which will usually be the case), repot them into the next sized pots; good mellow loam, enriched with an equal bulk of stable litter laid together a twelvemonth previous, and occasionally turned, will, with the addition of a little silver sand, be a suitable compost. Put a stake to each plant, and let them have regular attention to watering, air, and light; in three or four weeks they will be ready for another shift into the next sized pot, in which they may remain until the end of January or beginning of February, when they should be put into their blooming pots, using pots suited to the strength of each plant, and bearing in mind that as it is necessary that the pots be well filled with roots by the time the plants come into bloom, care should be taken not to *overpot*. As soon as the lower leaves turn yellow in the spring a little clear weak manure water may be used with advantage, and be continued until the bloom is nearly ready to

expand. Anything like forcing should be avoided, but a little fire heat will be beneficial in damp, dull, and foggy weather, and also whenever the temperature sinks to near 40°.

"Cleanliness is also a very important thing to attend to in the culture of the Pelargonium. No dead foliage should be allowed to remain on the plants, and if the green leaves become dirty or dusty they should be carefully washed, and the glass of the house, both inside and outside, should be kept quite clean. Fancy varieties require similar treatment to the large kinds; they will, however, bear a little more heat with advantage through the winter and early part of spring, taking especial care to avoid 'drawing' of the shoots."

NOTES ON BEDDING GERANIUMS.

VARIEGATED-LEAVED GERANIUMS.

Mrs. Lennox.—This variety has leaves with a clear white margin of good breadth, centre of leaf a pleasing green, truss moderate, flowers a deep scarlet, form of petal bad, but better than Mountain of Light; it grows freely, and is valuable from the pure white edging of its leaves, and good habit. This makes the most beautiful bed of all the variegated Geraniums.

Alma.—Apparently a seedling from Flower of the Day. It is, however, much superior to that well-known variety; the leaves are not so much crumpled, and the margin is a clear white, in which respect, however, it is inferior to the above. Alma produces a good truss of bloom with well-formed petals, grows very freely, both in pots and when planted out, and is an acquisition to the flower-garden.

Mountain of Snow.—Very similar to Mrs. Lennox. In our specimens margins scarcely so white; in others we have seen, quite so; may be used as Mrs. Lennox. A fine variety, and carrying a good truss of bloom.

Silver King.—Leaves with a broad margin of yellowish white, habit dwarf and compact, truss of bloom good, flower a rich scarlet, makes a rich-looking bed from its yellowish tinted foliage, and likewise an excellent edging to the horse-shoe or plain-leaved scarlets.

Attraction (Lee's).—The leaves of this variety have a greenish white margin, with a band of reddish purple surrounding the centre part. Although this and others in the same way are interesting, from having the *horse-shoe* mark combined with silver margined leaves, they have not the distinct look of those with only two-coloured leaves, and in our estimation are not so valuable for effect. This variety grows very freely; truss good, flowers a pale scarlet.

Countess of Warwick.—In the way of Attraction, but much superior. Margin clearer, purple band well defined, fine truss of bloom of a deep scarlet, petals well shaped, a good variety in its class.

Annie.—Leaves large and flat, with a yellowish margin; has the horse-shoe marking well defined, truss of bloom large, flowers a good scarlet.

HORSE-SHOE GERANIUMS.

General Pelissier.—A fine variety: margin of leaf pale green, with a well-marked purple band; centre of leaf a yellowish green, trusses on long footstalks, of a bright scarlet. This is good either for bedding or vases; it grows and blooms freely.

General Simpson.—Horse-shoe marking indistinct, dwarf habit, a good truss with flowers of a bright scarlet.

Boule de Feu (Ward).—Purple marking well defined, compact grower, blooms of a very bright scarlet with a white eye. We consider this the brightest scarlet of all the horse-shoe class.

King of Scarlets.—Plain leaf, dwarf grower, large truss, and fine petal; colour, rich scarlet.

REVIEW.

A Descriptive Catalogue of Trees, Conifers, &c. By Messrs. A. Paul & Son. Cheshunt, Herts.

We do not often notice Trade Catalogues, unless characterised by some special feature. Until within the last few years, it had been the practice with nurserymen to issue catalogues giving only the names of plants with prices, so that intending purchasers, unless well acquainted with the various plants, could form but an inadequate idea of the peculiarities of the various articles offered. A great improvement, however, has been effected recently by various nurserymen, and many classes of plants have been well described; still, trees, shrubs, and other plants have not met with the attention they deserved. The taste for ornamental planting has increased very much, and many of our finest ornamental trees and shrubs are now sought after and much used; still, unless seen, those who wished to purchase were not assisted in making a selection from the nursery catalogues hitherto issued. Messrs. Paul's catalogue is not only a detailed list of what they have to offer, but it is in reality an elaborate guide to purchasers, giving the botanical name, height, English name of each shrub or tree, with suitable remarks appended to them, which will be found of great advantage to those who are unable to select from nurseries.

CALENDAR FOR THE MONTH.

Auriculas.—These plants having been placed in their winter quarters will require but little to be done to them for some time. Keep them clean and tolerably dry.

Azaleas.—Attend carefully to watering these, for though apparently resting, if allowed to get too dry at this season, the flowers next year will be poor. Give air plentifully on mild days.

Camellias.—If any dust has collected on the leaves of these, it should be washed off with a sponge or syringe some fine morning; this will

show the flowers to the best advantage. Many of the early sorts will be coming into flower; give them liberal supplies of water. They will not need any fire-heat unless very severe weather sets in.

Carnations and Picotees.—It is now full late for potting into small pots the layers from the old stocks. If there are still such to be done, no time should be lost in performing it. The stock, generally, should be kept dry. Avoid wetting the foliage when watering. Giving plenty of air, and keeping the plants clean, is the principal labour these plants will require for some time to come.

Cinerarias.—These will now be growing very fast and should have corresponding room, more particularly those intended for early blooming. Keep the lights off on all favourable occasions, to prevent the leaf-stalks from drawing. Repot young stock that have not had their final shift.

Cold Frames.—Plants of all descriptions in frames and pits should never be left exposed in rainy weather at this season; still every opportunity should be taken to give a plentiful supply of air, when the weather is fine and mild. Water not with a rose, but individually, with a small-spouted pot that does not carry a deal of water or make any unnecessary wet; as the nights at this time of the year are very long and cold, it is necessary and indeed preferable to water all kinds of plants in the morning, so that all superfluous moisture may have a chance to pass off before evening; it is also well to avoid watering the foliage as much as possible. Keep everything as dry as the health and well-being of the plants will allow; frost will by this means be more easily kept from injuring the plants. Cover well up in frosty weather.

Conservatory and Show-house.—It is of the first importance in managing plants that they have particular and steady attention during the winter months as regards heat, air, and watering, and this is more particularly the case the first few weeks after they are housed. Chrysanthemums will now help to make a display in these houses; water them freely. Chinese Primroses are valuable decorative plants for winter; they should be watered with caution. Unless the weather be very severe, much fire-heat will not be required as yet; in fact, the less the better until after Christmas.

Cucumbers.—Those planted out in August and attended to as directed in previous Calendars will now be in good condition for winter bearing. Keep the plants thin of shoots; maintain a steady, regular bottom-heat, and a moist growing atmosphere, with a temperature by day of from 70° to 76°, and at night from 65° to 70°. Give air freely on mild days in the forenoon, and shut up early in the afternoon. By these means you will have plenty of Cucumbers during the winter, and by not leaving too many on the plants, they will continue in bearing, with good management, until July next.

Dahlias.—Store the roots for wintering, after carefully drying them. The seed will require attending, or it will get mouldy and perish.

Flower Garden.—Continue to pot any plants that it may be desirable to keep for next season. In the absence of frost, should dry weather set in, many of the beds will continue tolerable for a short time longer; they should be frequently gone over and cleared of all decaying

blooms and leaves; such beds as are really gone by are better planted at once with bulbs for spring flowering. Those beds that are latest cleared may be filled up from the preserve garden with Wallflowers in varieties, Primroses, Hellebores, Alyssums, Hepaticas, Saxifragas, and a long list of other things. Dwarf evergreens in pots are also useful for such purposes. Keep every place neat and tidy. Proceed with any intended alterations.

Forcing Hardy Shrubs.—Put in the first batch of Lilacs, Roses, Azaleas, Kalmias, Rhododendrons, &c.; plunge them in a nice steady bottom-heat. Keep up a moist atmosphere; they will not require as yet much fire-heat, unless in severe frosts.

Forcing Ground.—Make good beds for Seakale and Asparagus. Towards the end of the month take up the roots; place a few inches of soil on the beds, on this place the roots and fill in between the roots with soil. Give them a good watering in a few days, after that little is required until it is ready for use. Cover the frames at night; give air in fine weather. Sow Mustard and Cress weekly. Put some Rhubarb roots into heat.

Fruit (hardy).—Proceed with the planting of fruit trees in open, mild weather. Where the subsoil is of a gravelly, porous nature, little if any drainage will be required; but where the subsoil is of a retentive, clayey nature, the most thorough drainage should be adopted, in order to give the trees a good chance. If the pruning has been properly attended to during summer, there will be but very little that will require doing now; if there be any, it should be done as soon as the leaves are off. Keep the standard Apple and Pear trees open in the centre; take out strong upright leaders and branches that cross each other. Figs should be covered to protect the young wood from frosts. Continue to nail whilst the weather is mild; endeavour to get as much of this work done as is possible before Christmas. When the Gooseberry and Currant bushes are pruned, lime the ground and dig lightly over.

Greenhouse (hard-wooded).—Water at this season should be given sparingly, but at the same time the plants must not be allowed to suffer from want of it. Admit air freely, but not in currents; keep a dry and healthy atmosphere. *Soft-wooded.*—Give air carefully in cold weather. Do not crowd them, so that they may have all the light possible; water when absolutely necessary. Make fires to dry up damp in wet weather, and in frosty weather just sufficient to keep them in a healthy condition.

Hollyhocks.—Keep these dry, yet growing, by giving them pot-room.

Kitchen Garden.—Now is the season for making alterations. Drain wherever necessary. Manure all vacant ground, and dig or trench, or throw up into ridges. Earth up Celery when dry. Carrots, Parsnips, Beet-root, &c., should be immediately taken up and stored away, if not already done. Protect Lettuce and Endive from frosts, also Cauliflowers that are heading. Sow the first lot of Peas on a warm, sheltered border. Sow also a few Beans. Dress Asparagus beds; and when the weather is sufficiently dry hoe among Cabbages and Spinach.

Orchard House.—A cool, dry atmosphere, with thorough ventilation, is all that is at present necessary here.

Pansies.—Give plenty of air to the stock that is to be wintered in pots. If not already done, plant out those for blooming in beds, as well as seedlings.

Pelargoniums.—(See paper in the present number, page 347.)

Pinery.—Plants now showing fruit will require a rather higher temperature to assist the blooming. Fruit now swelling will require occasional waterings and a moist atmosphere. Fruit now ripening will not require watering, and they should have all the light possible, with a hot, dry atmosphere. Plants to show fruit in January should be kept dry, and in a rather lower temperature; but it should not be kept too low. Pines in all stages require bottom-heat. The young stock should have air whenever the weather is favourable; they should have a tolerably dry atmosphere, all the light possible, and a steady bottom-heat, and they will pass safely through the winter.

Pinks.—Pot up a few pairs of each kind to winter in frames with the Carnations. These, if not required to fill up vacancies in the beds, produce fine blooms if planted out in March.

Pleasure Grounds.—The present is the season for alterations here. All wet and retentive soils should be well drained. Trees of every description may now be planted. Rolling and sweeping are operations which will require to be daily performed to keep anything like a tidy appearance.

Stove.—The most important operations in this department, at this season, consist in keeping the plants clean and neat, and well watered. All plants done flowering should be placed as much out of sight as possible, and all plants in flower should be brought as much as possible into view.

Strawberry Plants.—If our previous directions have been attended to these will now be good plants, with well-formed, strong crowns, and able to do good work next season. As they will have done growing, they should be put into winter quarters, placing a sufficient number for the first batch of forcing plants into a cold frame, pit, Vinery, or Peach house. Ridging the plants is as good a mode as any for wintering them.

Tulips.—Choose every opportunity of getting them planted without delay, before bad weather sets in. The offsets should have been planted as recommended last month.

Vinery.—When Grapes are wanted in April the first house should be started immediately. The outside borders should have a good covering of leaves, and these should be covered over with long straw; if this be properly done, they will not require anything more during the winter. Some people experience considerable difficulty in getting their Vines to break properly. Now this oftentimes arises from the wood not being properly ripened the previous season. With a moist atmosphere and a genial temperature, there is no difficulty in getting the fine, plump, well-formed buds, on properly *matured* wood, to break strong and freely. The night temperature should not exceed 50° till each bud is fully swelled, when it may be raised to 55°; an increase on sunny days may be allowed of 20° to 25°.

Hybrid Perpetual
Lord Raglan.
Plate 121

J.ᵐᵉ Andrews Delt. & Linco

Printed by L. Clarke

Achimenes

Jno. Andrews Delt. & Lineo

N.°1. Carminata Splendens. — N.° 2. Parsonsi

Printed by C. Chabot

Plate 119

THE ROSE LORE

"Si nous avions à nommer [illegible]
ro[illegible]
ce[illegible]
Promenades d'un Curieux, 1850.

This most beautiful and [illegible] Rose
the Géant des Batailles by M. Guillot, [illegible]
out in the autumn of 1854. M. G[illegible]
sending out its parent, the Géant, also
There is no Rose that can at present com[illegible]
in brilliancy of colour; its scarlet is quite
habit it far surpasses its parent, it is [illegible]
fect in length, and with good cultivation
Rose. It does not appear to be so
Géant, and will probably long be
respects a first-class Rose.

A[illegible]

The new varieties, Carnations [illegible]
the subject of one of our plates [illegible]
Parsonstown Park, near Welwyn. Mr. [illegible] Parsons, the gar-
who kindly allowed us to figure them, [illegible] Mr Andrews
very successfully. These varieties are [illegible]
dual. Mr. Parsons has others also very
among which the best are Rosea exqui[illegible]
greater return in the amount of bloom for th[illegible]
its successful culture than the Acalanthes, [illegible]
eight months out of the twelve, in fact, as [illegible]
of plants is provided and started into gr[illegible]
principal bloom will be, however, in July and A[illegible]
can be grown in any moist, warm place, whether
the shelf of Pelargoniums and other greenhouse pl[illegible]
or conservatory can be kept gay [illegible] the spring
over, if a few each of Acalanthes, [illegible] are
for the purpose. These, with Lil[illegible]
The following are the best old va[illegible]
Versaillaise, Burmanni Lusuta, Car[illegible]
Gloriosa, Glenmilleria, Longiflora, [illegible]
rite, M. de Parpart, Incomparata, and [illegible]

THE ROSE LORD RAGLAN.

(PLATE 121.)

"Si nous avions à couronner—non pas une rosière—mais simplement un rosier, assurément notre couronne serait pour le Rosier Lord Raglan. Il a bien certainement la plus belle et la plus éclatante de toutes les Roses."—*Horticulteur Francais* for Sept, 1856.

THIS most beautiful and brilliant Rose was raised from seed of the Géant des Batailles by M. Guillot, père, of Lyons, and sent out in the autumn of 1854. M. G. had also the honour of sending out its parent, the Géant, although he did not raise it. There is no Rose that can at present compete with Lord Raglan in brilliancy of colour; its scarlet is quite dazzling. In vigour of habit it far surpasses its parent, for it makes shoots three to four feet in length, and with good cultivation will form a fine pillar Rose. It does not appear to be so inclined to mildew as the Géant, and will probably long be a favourite, as it is in all respects a first-class Rose.

ACHIMENES.

THE new varieties, Carminata splendens and Parsonsi, which formed the subject of one of our plates in the last number, were raised at Danesbury Park, near Welwyn, Herts, by Mr. Parsons, the gardener, who kindly allowed us to figure them, and which Mr. Andrews has done very successfully. These varieties are new in colour and very beautiful. Mr. Parsons has others also very dissimilar to existing kinds, among which the best are Rosea elegans and Gem. No plant gives a greater return in the amount of bloom for the little trouble necessary to its successful culture than the Achimenes, and it may be had in flower eight months out of the twelve; in fact, at almost any time, if a succession of plants is provided and started into growth at various times. The principal bloom will be, however, in July and August, plants for which can be grown in any moist, warm place, whether house or pit, to take the place of Pelargoniums and other greenhouse plants. A greenhouse or conservatory can be kept gay after the spring flowering plants are over, if a few each of Achimenes, Fuchsias, and Balsams are grown on for the purpose. These, with Lilies, make a very interesting display. The following are the best old varieties of Achimenes:—Ambrose Verschaffelt, Baumanni hirsuta, Carl Wolfarth, Coccinea grandiflora, Gigantea, Gloxiniæflora, Longiflora major, Louis Van Houtte, Margueritæ, M. de Parpart, Reticulata, and Treherne Thomas.

OPEN BRICK WALLS *VERSUS* PROTECTION.

(*Concluded from page* 325.)

THE next witness called for the defence in this case was Mr. William Ingram, Belvoir Castle, Grantham, who deposed to the crops not being generally good in his neighbourhood, although his own crops of Peaches, Nectarines, Apricots, and Golden-drop Plums were good. That he uses straw mats suspended upon poles, and that for three years successively he has saved good crops of Apricots upon south walls by using those mats, whereas for the three previous years before he used those coverings no fruit was obtained; beneath those coverings a self-registering thermometer indicated 32°, and one at the same time fully exposed indicated 24° Fahrenheit. His natural soil is lias clay, which he has well drained. This witness further stated, upon cross-examination, that he had seen good crops of Apricots upon trees trained to cottages, but he did not consider those unprotected.

Mr. W. Elliott, Lilleshall, Newport, Salop, next adverted to the crops being very scarce with him and in his neighbourhood, whether protected or not, all having shared the same fate. That he used light canvas on rollers, and that he thinks it advisable to have the greater part of the trees protected, this being his first failure since he has used protection: his borders do not want draining.

Mr. John Spink, Castle Gardens, Warwick, was next brought forward. He stated that he had not known such a scarcity of wall fruit these thirty years; upon east aspects a complete failure—west aspects, rather better crops. He protects with netting; his neighbours generally use Yew and Laurel branches. He considers that without protection a complete failure may be anticipated.

Mr. John Haythorne, Woolaton, Nottingham, here deposed to the crops being mostly a failure in his neighbourhood, with the exception of Apricots. He uses a thick close net, evergreen boughs, and frigi-domo, which he considers a good covering, and has always found it, when made to take up and let down, necessary to ensure good crops; he considers glass cases a sufficient proof of this. But, upon cross-examination, it was elicited from this witness that although he had paid great attention to his coverings this season, and had covered every tree, he had met with a total failure, with the exception of one from which he had to thin the fruit: the cause of the failure of his other trees he could not discover, as all were covered with the same material, and all were in good health.

Mr. Charles Keetly, Osmaston Hall, Derby, next stated that the crops of wall fruit were very bad with him, with the exception of Apricots; that he protects with haybands, Yew branches, and old fish nets. He has well drained his borders. He has never, throughout his observation, seen equally good crops upon the unprotected as upon the protected trees.

Mr. Henry Hardinge, Pewsey, Wilts, said that the crops were pretty good with him; that fine netting and canvas were generally

used to protect with. He considers that the borders are not so generally drained as they ought to be; also, throughout his general observations, he does not remember seeing such good crops as upon protected trees.

Mr. W. J. Ward, Prospect Hill, Reading, next stated that he had plenty of Peaches, but Apricots were very thin and all other fruits a total failure. He has been eleven years in this place, and during this time he has generally had good crops, but has always used slight protection. He has often noticed a failure amongst his neighbours where not protected. He is no advocate for heavy protection, and thinks nets quite adequate.

Mr. Wm. Cox, Moseley Hall, next deposed to the crops being very scarce indeed with him, and that as far as his practice extends, which is over twenty years, he considers the coverings should be glass, and nothing else. This he has proved by using old garden lights placed lengthways along the top of the wall, giving them a fall of six inches merely to shoot off the water; by this plan, last season he had a good crop, but this season none. He also considers it an excellent plan to place breaks with either boards or straw hurdles placed edgeways against the wall at about 30 or 40 feet distance from each other, but he is very careful not to place anything dark in front of the trees. This witness also speaks very decidedly as to not having seen as good crops where the trees were not covered as upon those that were.

Mr. Rowell, Bolton House, Gateshead, next bore evidence to the crops being very scarce with him; that he protects with calico and Spruce Fir branches. His borders are well drained, and the protected portion of his trees are the only ones that have any fruit upon them.

Mr. Wm. Laudon, Downton Castle, here stated that the crops in his locality were very poor, with the exception of his own, and that he has abundance, and never once failed a crop. He covers some of his trees with Haythorn's hexagon net and Fir branches; those covered with the branches were by far the best. This being the place of that celebrated horticulturist, the late Thomas Andrew Knight, Esq., the most scientific principle had been adopted in making the borders and planting the trees: hence one principal cause of this witness's success; but he must state that throughout his general observation he had never seen crops equal to the protected ones.

This being the conclusion as regards witnesses for the defence, it was considered that as prosecutor had introduced some quotations in support of his case, that there could be no objection if the same course was adopted for the defence. The extract that would be made was merely to show, that those who judiciously employed defendant were looked upon as deserving approbation rather than censure by the author, who was a very highly influential man in all scientific affairs. P. Neill, Esq., F.L.S., and Secretary to the Caledonian Horticultural Society, says, in "Sir John Sinclair's Report," 1814, chap. ix., "That a variable and unsettled climate tends to call into action all the powers of the mind and to produce habits of unceasing attention; and when a gardener is able to raise a tolerable crop, both of the more tender fruits and vegetables, he has doubtless more real merit in accomplishing this object, even though the articles should be somewhat inferior in quality,

than he who in a more propitious soil and climate raises them to the utmost perfection." As this case had already occupied such a very considerable time no more extracts would be brought forward, as it was not wished to unnecessarily intrude upon valuable time, it being considered that quite sufficient had been said to vindicate defendant in the course he had pursued.

In summing up it was hoped that very great care and attention had been paid to the evidence as it was brought forward in this case, it being a case that materially affected a very great portion of the public of this country, at least the fruit-growing portion of it, upon the question of economy—economy now being an almost universal motto; this had been, it appears, one of the principal inducements of the prosecution in bringing forward this case. It had appeared by the evidence that in some places a very considerable outlay had been submitted to, in providing glass walls and coverings of all kinds to ensure crops, while in other places nothing of the kind had been used; therefore, to arrive at a conclusion as to which was the most economical system, or the system which gave the best results in accordance with its outlay, the evidence would be examined and analysed. The evidence here having been minutely gone through, it appeared by the analysis that twenty-three of the witnesses had employed the defendant, and out of those twenty-three who had covered there were only five who had deposed to their having good crops, and two spoke to having but middling ones, and the remaining sixteen were all bad. Seven of the witnesses had not protected at all: four of these seven speak to having good crops, the remaining three deposing to their generally having had the best crops upon their trees when unprotected. Eleven of the witnesses speak to their having covered a part of their trees and leaving a part uncovered, and the whole of these eleven speak to having the best crops upon the uncovered trees, thus making in all eighteen of the witnesses who depose to the best crops upon their trees when unprotected. These, it must be remembered, were not isolated cases; therefore, as they occur throughout a wide extent of country, they could not be influenced by local causes. The next point of the evidence referred to was in regard to the temporary coping so strongly urged by even plaintiff's witnesses, several of whom, who had spoken to their not employing defendant, having used this form of protection, and consider this simple and easy process quite adequate to all their requirements; but this point would be referred to again in elucidation of some theoretical points which defendant, in the course of his address, had brought forward, and which it was considered incumbent to touch upon in—to use defendant's own words—a "philosophical point of view." First, in regard to the deterioration of our climate; if such were the case, from what cause did it proceed? Was it from increased humidity?—the thorough drainage our lands of late years has undergone at the hands of our agriculturists would lead us to look to a different issue than this. This same rule will also hold good in regard to the temperature of our climate, for where water is in the soil no heat can penetrate; therefore, as the water recedes from the soil through drainage, as surely will heat follow and penetrate that soil; and as there are at the present

day but few tracts of land that have not undergone the operation of drainage within these last few years, consequently rendering it fit for the absorption of the summer's heat, and holding it in store till the temperature of the atmosphere is lower than that of the earth, when this accumulated heat is radiated; therefore, this increased surface of radiation must tend to increase rather than diminish our temperature; and as there is no philosophical evidence of our being further removed from the equator and placed in a colder latitude, this idea of decreased temperature must be banished. It was also again asked if this deterioration spoken of proceeded from more sudden or violent changes; if so, from whence do they proceed? for we have still the same expansive Atlantic on one side, and the same narrow channel on the other, as when Sir W. Temple, in 1683, wrote so enthusiastically in reference to the beautiful Peaches his garden then produced, which he stated had been tasted by a gentleman from Gascony, who had pronounced them quite equal to any that climate could furnish. Again, in our own day, that indefatigable horticulturist, the late Thomas Andrew Knight, Esq.—who is no mean authority in these matters—was strongly impressed with the idea that with judicious cultivation the Peach might be sufficiently hardened as to be naturalised to the climate of England, so as to succeed in ripening its fruit, even as a standard, in the open air. (Some expressions of regret were here made that our horticulturists had not followed up these ideas by applying the same energies to hybridising, with a view of accomplishing this end, as they had devoted to the opposite cause.) The next point in defendant's charge referred to was where he asked the question—"What had the ripening of the wood and draining the borders to do with spring protection?" This was a point it was considered required some elucidation, for both those things tended ulteriorly to this very point to which defendant refers, namely, the moisture contained in the flower, in the first place by divesting a tree of the means of obtaining a superabundant supply of moisture on the one hand, and by thinning the shoots and nailing them so as to expose them to the full influence of the light on the other, there will be a greater amount of organic matter stored up, and, in consequence, the blossom will have more strength and less moisture, to enable it to withstand any inclemency it may be subjected to. Again, defendant was certainly quite right in the view he had taken in regard to radiation taking place most in a clear atmosphere, but he had certainly, to a certain degree, criminated himself in making use of these words; for, if radiation takes place most in a clear atmosphere, then defendant, by shading too much the objects he overhangs, must be the means of checking this radiation; we, however, here find the principal advantage of broad copings, which do not check radiation, but allow the walls to give out their accumulated heat, which when given out always ascends perpendicularly, it therefore thus rises until it strikes against the coping, which causes it again to return, thus keeping the walls at a considerably higher temperature than the surrounding atmosphere. To prove this it was advised that two registering thermometers be placed —one to hang within six inches of the wall beneath the coping, and the other at about three or four feet from the wall; both to be at equal heights from the ground.

Therefore, in taking all these things into consideration, it was considered that the justice of the case would be met by returning a verdict to the effect, that our horticulturists be requested to discharge defendant from their service as soon as possible—except in extreme cases, and that a more general use be made of the temporary copings; and also, that this verdict be accompanied with a request that the same gentlemen will use their utmost influence and energies in endeavouring to bring forward a more hardy class of those fruits that now require the assistance of the plaintiff in this case. It was hoped and believed that the time was not far distant when this very desirable object would be attained, so that we should soon be enabled to gather our Peaches from trees in the open air in favourable situations. Verdict accordingly.

There now only remained the returning public thanks to the several witnesses who had so willingly come forward with their evidence to assist in carrying through this case, which was here done in the most eloquent terms; but at the same time regret was expressed that so many persons should yet be found so reluctant to come forward to assist in the advancement of science, as had been found to be the case in issuing the summons for the information required in this matter.

THOMAS W. ABBOTT.

Ribston Park, Wetherby.

THE DAHLIAS OF 1855.

THE experience of the past season proves that slight dependance can be placed on any opinion which may be formed of the capabilities of a Dahlia, on its first appearance as a seedling. The gentlemen who furnished the "tabular list" in January last were all more or less wrong. Nor do I see how such errors are to be avoided. Seedlings exhibited for *proof* are only seen by the public at their best; and there is no possibility of forming any reliable estimate of their constancy. Nay, the very raisers may be deceived with respect to this property; for it sometimes happens that a flower is constant one year and quite the reverse another. There is, consequently, no reason for affirming that the opinions recorded in January were not *correct*, so far as the means of arriving at sound conclusions had been afforded.

"Constancy has so much to do with making a Dahlia a favourite," that no new variety can hope to become established in public esteem, which does not reckon this as one of its primary qualities. I have long felt that this property is not sufficiently insisted on. I can call to mind several occasions when, if I had not taken the precaution to form a *corps de reserve*, by planting out a few of the constant second-rate varieties, somewhat contemptuously styled "useful," I should have found it impossible to make up the full tale of presentable flowers when the day of exhibition came round. I have now arrived at the stern determination of discarding (after a fair and impartial trial), all those sorts—however beautiful they may *occasionally* be—which do not offer a reasonable chance of one good bloom, from two or three plants, when

wanted. With these ideas in my mind, it follows that I differ considerably from the writer in last month's *Florist* in my estimation of the order in which the Dahlias of 1855 deserve to be placed. If I were called upon now to place them, I should certainly assign them very different positions from those in which I located them in the *Florist* for November last, two months before the compilation of the "tabular list." I should be disposed almost to reverse the places of some of them, and should have no hesitation in enumerating the best *six* Dahlias of the season in the following order:—

1. Lord Palmerston.
2. Colonel Windham.
3. Eclipse.
4. Grand Sultan.
5. Lollipop.
6. Miss Burdett Coutts.

Lord Palmerston I consider one of the noblest flowers ever introduced. I fully concur in the opinion that "there is no Dahlia to equal it in habit," &c. In forming our estimate of a Dahlia, we should not, I think, dwell too much upon the possession of isolated "points." It should be considered *as a whole*. I admit that there is no one property, taken singly, in which Lord Palmerston is not beaten by some individual flower or other; but I contend that for the possession of *all* the desirable qualities in a marked degree, it surpasses any Dahlia sent out last spring. The same remarks apply, with some modification, to Colonel Windham and Eclipse, which I place second and third, respectively. Grand Sultan is not so constant as the first three, but sufficiently so to afford a fair chance of a good bloom, on any given day, to the grower who manages his plant judiciously, more particularly with reference to disbudding. Lollipop and Miss Burdett Coutts exhibit glaring faults, each in its own way. Perhaps it is not too much to assert that the latter is indebted to its constancy alone for being able to hold its place. I do not deny that Lollipop is the most popular flower of the batch. Let the fact be granted. Still popularity is no proof of excellence: and I am desirous to draw attention to what it *is*, rather than what people *believe it to be*. In every respect save one, I am ready to allow supremacy to this variety; but its defect of petal is too conspicuous to permit me to place it in the first rank. I fancy I recognise in it the type of a progeny which may exhibit all the virtues, without the one vice of their parent. In Miss Burdett Coutts a fault of an opposite character prevails. The petals are faultless taken *per se*, but produced in scanty numbers: hence the interstices between them, which give a jagged or milled appearance to the circumference of the flower. Yet, with all this, its constancy and *telling* appearance in a stand will, in all probability, suffice to keep it in cultivation until a better formed flower of the same colour shall have usurped its place. I am not sure that I should be doing justice in omitting to enumerate Captain Ingram as a flower worthy of commendation.

But what of the rest? Are such varieties as Bessie, Perfection, Mrs. Wheeler, and Duchess of Wellington to be utterly and unpardonably condemned? By no means. Give them a further term of probation. There is no doubt that, at their best, they are more beautiful than those I have selected. The rarity with which they don their best

attire is my reason for assigning them a less exalted position. I shall grow them all again, and it is quite probable that, by this time next year, some of them will have retrieved their characters. There are many who prefer one grand bloom in a season to twenty moderate ones, and who find pleasurable excitement in the very uncertainty of the attainment. Individuals of this temperament *will*, and those who grow for exhibition exclusively *must*, cultivate these uncertain varieties; but he who loves to see plenty of blooms at home, as well as to show them abroad occasionally, will do wisely—especially if he is limited as to space—to confine his attention to those on which he feels he can *depend*. I am by no means insensible to the charms of Bessie, bu she has proved so coy a lass during the past autumn, and "so hard to get," as the northern censors have it, that I must confess to some abatement of my ardour. Uncertainty would seem the besetting sin of the yellow Dahlia. Yellow Standard, Mrs. Seldon, Louisa Glenny, and Duchess of Kent, all tell the same tale; and the marked declension of Yellow Beauty, as the season advanced, only confirms the notion that the problem of a good constant yellow variety is yet to be solved. I incline to think the want will ere long be supplied. In the collection of Mr. Holmes—the second best 24 at the Crystal Palace—I remarked a noble yellow sort (a yearling, I presume), named John Dory. Now I will hazard an opinion that this variety will prove in the yellow class what Lord Palmerston is in the dark scarlet. I look forward with much interest to its distribution and general cultivation. Perfection, if not an absolute failure, has not yet vindicated the pretensions implied in its name: still, I am much deceived if we do not yet find this kind capable of better things than it has hitherto accomplished. Mrs. Wheeler has been occasionally produced in a manner that would justify its claim to the very highest position; while, on the other hand, numerous instances may be found in which plants failed to produce a showable specimen throughout the entire season. I agree with the observation that "Duchess of Wellington has not generally been well managed;" neither am I in a position to deny that "it is exquisite when in fine character." I can only regret that it has not been my good fortune to see it in that condition.

The promise for the coming year is great, and I trust the performance will not lag far behind. Notwithstanding the worthlessness of my predictions with regard to the Dahlias of 1855, I will venture an opinion with regard to those of 1856, if a small space in next month's number is allowed me for the purpose.

A. S. H.

NEW ROSES.

Now that the Rose season is on the wane, and admirers of this flower are preparing to re-adjust and improve their collections, it may be both interesting and useful to take a brief retrospect of the past year.

The summer Roses, and, indeed, the first blooms of the autumnals, were, in Hertfordshire, all that could be wished. So much, however,

cannot be said in favour of the late blooms of the perpetuals; the closing days of September and the opening days of October were successively wet, and many buds of promise expanded but indifferently. Now we have a change, and what a remarkable effect a sunny day in October produces on a bed of autumnal Roses, especially if several preceding days have been wet and cloudy. The rain ceases, the clouds break away, the sun again shines, and suddenly the Tea-scented, Chinese, and Bourbon Roses are flushed with blossoms, lighting up the dark masses of foliage with their white, rose, orange, purple, and crimson tints. At the present date (October 20) the following kinds are blooming beautifully:—*Hybrid Perpetuals*: Souvenir de Reine d'Angleterre, Gloire de Vitry, Bacchus, Duchess of Sutherland, Prince Leon, Geant des Batailles, General Jacqueminot, Comte Brobinsky, Comte Odart, General Castellane, Jules Margottin, Souvenir d'Henri Clay. *Noisette*: Fellenberg. *Bourbon*: Souvenir de la Malmaison, Gloire de Rosomene, Queen, Leon Oursel, Armosa, Celimene, Angelina Bucelle, Dupetit Thouars, Aurore du Guide, Prince Albert, Duchesse de Thuringe, Justine, Madame Cousin, and Sir J. Paxton. *Chinese*: Fabvier and Mrs. Bosanquet. *Tea-scented*: Narcisse, Devoniensis, Gloire de Dijon, Nisida, Comte de Paris, Safrano, and Canary. The above kinds we can with confidence recommend to those who may wish for a supply of hardy and *really late blooming* Roses.

My object at present, however, is rather to say something about the novelties of the season than to discourse on Roses in general. Presuming your readers to be already acquainted with the merits and demerits of the older kinds, I shall take leave of this part of the subject, with the remark that the present year has been more fruitful than many in the introduction of really valuable novelties. The Hybrid Perpetuals are, as usual, in the ascendant, and first among them we name Triomphe de l'Exposition, which is undoubtedly one of the best; the flowers are of a beautiful reddish crimson, large, full, and well shaped: the growth is vigorous, and the plant appears equally suitable either for a standard, pillar, or pot rose. Arthur de Sansal is also an excellent variety; it is one of the numerous seedlings recently sprung from the Geant des Batailles, but possesses more of the bright purple shade of many of the Bourbon Roses; is distinct and really good. Bacchus (Paul) is another of the same race; the flowers are far brighter than the Geant, large, full, and produced in great abundance, both in summer and autumn; this Rose, on account of the brilliancy of its colour and profuseness of its flowering, should be in every collection. General Simpson is also an excellent Rose, of a bright carmine colour, large, full, and finely shaped, and, in addition to its other capabilities, will probably make a good pot Rose. General Pelissier is also very promising; the flowers are of a delicate rose colour, large, full, and very sweet; it flowers freely in autumn, and appears likely to make a good standard or pillar Rose. Helen (Paul) is one of the sweetest Roses in existence; the colour is blush, with rosy centre; uncertain out of doors, but of great beauty when grown under glass. Imperatrice des Français is also good and distinct; the flowers are flesh colour, with whitish centre, of fine form, and produced freely in autumn; the growth is vigorous. Mathurin Regnier

can scarcely be too highly spoken of; it is in the way of William Griffiths, but larger, and brighter in colour; the growth is compact, and it will doubtless form an excellent standard Rose. Madame Knorr is entirely new in style, being a perpetual Gallica Rose, possessing in a high degree the form and fragrance for which the Gallica Roses are so esteemed; the flowers are Rose colour, with blush edges. Madame Desirée Giraud is the best of the striped Perpetual Roses; it may be described as a striped Baronne Prevost, and is recommended with confidence as a large, full, and good flower. Ornement des Jardins is quite worthy of the name it bears, for it is one of the most attractive flowers in the garden; the colour is brilliant crimson, the flowers are well shaped, full, very velvety, and produced freely in autumn; growth moderate. Pæonia is a large showy crimson Rose, good also for effect, but what the critical eye might pronounce rather coarse. Prince Noir is a novelty, and an advance upon all previous dark velvety Roses; it might very appropriately be called a perpetual Tuscany, and like that old favourite is but semi-double. Pauline Lanzezeur is a good Rose; colour bright crimson changing to violet. Souvenir de Reine d'Angleterre is unquestionably a first-rate variety; it is blooming now (October 20) equal to any Rose in the garden; the flowers are bright rose, large, full, finely shaped, and very sweet; a vigorous habit renders it equally suitable either for a standard, pillar, or pot Rose. Triomphe d'Avranches is one of those large, full, bright red Roses which is sure to please; the growth is compact rather than vigorous. The above are all Hybrid Perpetuals.

Among the Perpetual Moss Roses, Alfred de Dalmas and Emilie de Girardin are perhaps the best of the new ones; both are rose colour: the flowers of the former are whitish at their circumference, and produced in clusters.

Of Bourbon Roses, Comte de Montijo, rich reddish purple; Empress Eugenie, rose, edges purple; and Marquis Balbiano, rose, tinged with silver, are decided acquisitions; the two latter are sufficiently vigorous to be grown as perpetual blooming, pillar, or climbing Roses. There is one Noisette Rose to which attention should be directed,—Miss Gray. It has been received here from a correspondent in Philadelphia, in whom we have implicit confidence, as a variety of great merit; the flowers are of a bright yellow, egg shaped, and said to be better than either Augusta, Cloth of Gold, or Solfaterre. It is evidently a free growing hardy-constitutioned sort, but our propagator has left it no chance to flower this summer; it is, therefore, still one that requires to be taken on trust. Another American variety, Souvenir d'Henri Clay, we turn to with more complete satisfaction, as we are enabled to recommend it from our own sighting; the flowers are blush pink, in the way of Stanwell Perpetual, which it surpasses, while resembling that Rose in the good qualities of fragrance and late blooming.

Thus far I have endeavoured to lay before your readers a brief sketch of the most valuable novelties Allowances must be made for difficulties in the way of arriving at definite conclusions. Many of the new Roses travel some hundreds of miles, and often in a weakly state, on their way to the English Rose grounds; many require a year's rest before they

thoroughly re-establish themselves, and some never regain the freshness and vigour of plants transplanted from nearer home. Hence the number above given is small in comparison with the number of new kinds actually introduced. Let it, however, be understood that the unnoticed are not condemned but merely reserved for further trial. Of kinds one or two years older more positive information may be given. Among these the following may be safely chosen as of superior merit:—*Moss*: Baronne de Wassenaer, bright red; Captain Ingram, dark purple; Gloire de Mousseux, blush. *Hybrid Perpetual*: Alphonse de Lamartine, rosy blush; Gloire de Vitry, light rose; Lord Raglan, scarlet crimson; Madame de Cambaceres, rosy carmine; Madame Masson, reddish crimson; Madame Martel, rosy white; Madame Vidot, flesh. *Bourbon*: Dr. Leprestre, purplish red; Ferdinand Deppe, reddish violet; Omar Pacha, brilliant red; Prince Albert, scarlet crimson; Reveil, cherry shaded. This list might be considerably extended, but I fear I have already trespassed too far on your valuable space.

WILLIAM PAUL.

Nurseries, Cheshunt, Herts.

[This excellent paper should have appeared in our last number, but unfortunately it arrived too late. Mr. Paul's critique on the new Roses will, however, be read with interest, showing, as it does, how some varieties vary in different localities, as we find that not only Mr. Paul but many of our correspondents differ from Mr. Rivers in his estimation of certain kinds. This, however, will always be the case.—ED.]

BRITISH POMOLOGICAL SOCIETY.

Nov. 6.—Mr. HOGG in the chair. Four new members were elected. Mr. Spencer, of Bowood, Calne, Wilts, read a communication on the orchards in his neighbourhood, together with some account of the fruits best adapted for that locality. Some remarks were also made by Mr. Varden, of Seaford Grange, near Pershore, on the effects of the frost last spring upon fruit trees growing at different altitudes and subject to various degrees of exposure. Both these papers will appear in the Transactions of the Society. Beautiful bunches of the Bowood Muscat Grape were exhibited by Mr. Spencer. A full account of this new and excellent variety, together with a coloured plate of it, will be given by us in an early number next year. Mr. Melville, gardener at Dalmeney Park, near Edinburgh, showed examples of a seedling Grape, a cross between the Black Damascus and Black Prince. It was considered to be no improvement on existing varieties. Mr. Turner, gardener to J. Hill, Esq., Streatham, produced a handsome bunch of Barbarossa Grapes, weighing 5 lbs. 7 oz. Specimens of Black Hamburgh, ripened in a greenhouse without fireheat, came from Mr. Spencer. They were large, well coloured, and excellent in flavour. Mr. Tillyard also sent a boxful of this Grape large and well coloured. A bunch of the curious Lady's Finger Grape, or Cornichon Blanc, was exhibited by Mr. Hogan,

Lockwood Gardens, near Huddersfield. Champion Grapes were also furnished by Messrs. Lee, of Hammersmith. Mr. Tillyard sent two Black Jamaica and one Ripley Queen Pine Apple weighing about 4 lbs. each. Some seedling Pears and Apples were exhibited, none of which were, however, considered worthy of cultivation. Specimens of Portugal and other Quinces were shown by H. B. Ker, Esq., and a collection of Oranges grown against an open wall in Glamorganshire were sent by Mr. Challis, gardener at Margam Park, in that county. They were good-looking fruit, and quite ripe. Morello Cherries were shown by Mr. Tillyard, and specimens of a late American variety of yellow-fleshed Peach were exhibited by Mr. Rivers. It is a freestone sort, and was considered valuable for its lateness.

POT CULTIVATION OF THE PHLOX.

HAVING grown the Phlox in pots successfully for a number of years, I trust the following hints will prove acceptable to those readers who take an interest in this lovely tribe of plants, for although all the varieties are easy of cultivation, they are seldom seen so well managed as they might be with a little extra care and attention. About the 1st of March a selection should be made from plants struck the previous season, choosing those that are throwing up vigorous shoots. Put one plant in each pot, allowing not more than two stems on each plant, and using pots from eight to twelve inches in diameter, according to the strength of the plants. Avoiding excessive drainage, pot with rich fibrous loam, adding a little sand and well decomposed manure. The dwarf growing sorts may be placed under glass at once either in a cold frame or greenhouse and should be kept as near the glass as convenient. The dwarfer they can be grown the better. Give air on all possible opportunities, and a little weak liquid manure may be given with advantage occasionally. For making this nothing answers better than sheep droppings; it both adds to the size of the spike and imparts to the foliage a dark shining green. The tall growing varieties may be plunged out of doors in any sheltered situation and be brought into the conservatory or greenhouse when they begin to show flower, when from their having long naked stems the pots may be appropriately placed in the background out of sight, and the fine head of bloom shown above the other plants. By a careful selection of the kinds, and bringing them in as they show flower, a succession of blooms may be kept up from June till October. When grown to any extent in the above manner they make a beautiful display, and in addition to their lovely colour many of the sorts are highly perfumed. In re-potting the Phlox, care must be taken not to break or reduce the ball, even though shifting from a twelve to an eighteen inch pot, as on this particular much of the future success of the plant depends. Should large specimens be wanted, those that have flowered once may be kept through the winter in a cold frame, or if this is not convenient they may be plunged out of doors and covered with three inches of coal

ashes or tanners' bark, then taken up early in spring, re-potted, thinned to three or four stems, and treated as above directed. They will thus amply repay any little care and attention that may have been bestowed on them. In conclusion, I may remark that to grow the Phlox in perfection, the plants should be renewed from cuttings at least every three years, either for pot or out-door culture.

JOHN DOWNIE.

West Coates Nursery, Edinburgh.

TRITONIA AUREA.

THE Tritonia and the allied genera—the Ixias, Sparaxis, Watsonias, &c.—belong to a family of Cape bulbous plants which deserve more general cultivation. In bygone times this family of plants was more frequently met with than at the present day. We do occasionally meet with a few plants occupying a sunny spot in the flower garden, or in pots in the greenhouse, where their gay and various coloured flowers never fail to excite our admiration.

The species which forms the subject of the present notice is of recent introduction, and so far promises to become a great favourite. As a pot plant it forms a desirable acquisition for the decoration of the greenhouse during the latter part of summer and early autumn months, the colour of the flowers making a beautiful contrast with the greater portion of plants in bloom at that season. It may here be remarked that the bright orange yellow of this Tritonia is exceedingly rare amongst our stove and greenhouse plants: of Orchids, some of the Epidendrums have a resemblance to it, and amongst stove plants the old Cestrum aurantiacum is one of the best that approaches somewhat the colour of the Tritonia, and is, by-the-by, a bush that ought to be in every collection of plants. Sandy loam and leaf soil or peat form a desirable compost for the Tritonia, and the bulbs should be re-potted as soon as they are thoroughly matured.

If this is done, and the pots placed in a pit where protection from severe frost can be given them, it will be all they require till they commence growing; when this is the case, and the pots are partly filled with roots, they will then—and not till then—require a moderate supply of water, increasing the quantity as the plants advance in growth. During the summer months the plants may be removed to the open air, or the glass removed from the pit or frame in which they are standing, merely placing them over the pots to protect them from heavy rain.

By the end of July the flower-stems will be making their appearance, and they may then be removed to the greenhouse, where they will soon commence to bloom, and with the assistance of an occasional watering with liquid manure they will continue in perfection for a great length of time.

The colour of this plant is one that is much desired for the flower-

garden. Hitherto we have few plants that will equal its rich orange colour, that are adapted for bedding purposes. With a little management it may be grown in great perfection in the open air. I have this season seen a mass of it which, in the middle of September, presented a beautiful appearance. It was planted on a raised bed in a mixture of peat, loam, and decayed leaves—in light soils, of course, this preparation would be unnecessary.

There is a great variety of plants, such as the Liliums, Gladiolus, and several species belonging to the genera above enumerated, which are in themselves exceedingly beautiful, though not adapted for bedding purposes, in consequence of their meagre appearance as regards foliage. In the neighbourhood of Paris and other parts of France, this defect is remedied by mixing with them such plants as will supply the necessary amount of foliage. The common Asparagus is used extensively for this purpose, and I have heard those who have been accustomed to visit those gardens speak in high terms of the effect produced. This Tritonia, though less in need of such assistance, would doubtless be greatly improved in appearance by the admixture of a suitable "undergrowth."

The Asparagus, of course, would only be suitable for such plants as would throw their flowers partly above its foliage, but for dwarfer flowering plants there are numerous low-growing evergreens that would answer the purpose admirably, and probably many of the hardy Ferns, for certain situations, might be turned to good account.

O. P.

THE IMPROVEMENT OF SOILS.

It is an established law that the constituents or substances which enter into the formation of a fertile soil and the atmosphere of plants and of animals are the same, that is to say, the bodies of animals, the substances of plants, and the ordinary soil and atmosphere are formed of the same materials. The practical inference from such a proposition is this, that, in order to obtain as large an amount of produce as possible, it is necessary that all the constituents of plants and animals should be present either in the soil or atmosphere, or both. We are unable to alter the composition of the atmosphere, because certain of the laws which govern it cause a very equal mixture of its constituents throughout its whole extent. We must, therefore, turn our attention to the soil, ascertain its composition, and so change it if necessary, as to present to the roots of plants all the substances which are requisite for their growth and perfection. As there is generally more vacant ground in gardens at this season of the year than at any other, a few remarks on the improvement of soils may not be out of place; matters of this kind can have most attention at this time of the year. The subject is one of vast importance, and demands volumes. I can, therefore, only touch upon a very few points. I may premise that I profess no great understanding of the subject, though I have given it much thought.

A very fertile soil must contain a considerable supply of *all* the

inorganic ingredients necessary for the support of plants. In general soils are wanting in some or other of these ingredients, and are, therefore, not fitted to grow perhaps any one crop with luxuriance.

The first step in the improvement of soils is thorough drainage where it is required, and, after that, deep cultivation and the addition of those ingredients of which it is most wanting. The advantages of drainage have so often been insisted on, that it is not necessary to state them here. By deep digging we not only make a free passage for the roots, and let the air and rains penetrate more easily; but, in addition to these, we bring new earth to the surface. This forms a deeper soil, and more or less alters both its physical qualities and its chemical composition. A subsoil may gradually become rich in those substances, of which the surface soil has been robbed by the rains; by bringing up a portion of this subsoil by deep digging we restore to the surface soil a part of what it has been gradually losing. We bring up what may probably render it more fertile than before. By deep and frequent working of the land its parts are more minutely divided, the air gets access to every particle, it is rendered lighter, more durable, and more permeable to the roots. The vegetable matter it contains decomposes more rapidly by a constant turning of the soil, so that wherever the fibres of the roots penetrate they find organic food provided for them, and an abundant supply of the oxygen of the atmosphere to aid in preparing it. The production of ammonia and of nitric acid also, and the absorption of one or both from the air, take place to a greater extent the finer the soil is pulverised, and the more it has been exposed to the action of the atmosphere. All soils likewise contain an admixture of fragments of those minerals of which tne granatic and trap rock are composed, which, by their decay, yield new supplies of inorganic food to the growing plants. The more frequently they are exposed to the air, the more rapidly do these fragments crumble away and decompose. There are few soils so stubborn as not to show themselves grateful in proportion to the amount of this kind of labour that may be bestowed upon them.

The physical properties of soil have a very great influence on its average fertility. The admixture of pure sand with clay soils produces an alteration which is often beneficial, and which is almost wholly physical; the sand opens the pores of the clay, and makes it more permeable to the air. I have seen clayey soils which refused to grow Carrots, but which, after a good portion of river sand had been mixed with it, and it had been got fine by frequent working, grew as fine a crop of Carrots and of as good quality as any person could desire. The admixture of clay with sandy or peaty soil produces both a physical and chemical change. The clay not only consolidates but gives body to the sand or peat, but it also mixes with them certain earthy and saline substances necessary to plants which neither the sand nor peat might originally contain in sufficient abundance. It thus alters its chemical composition, and fits it for nourishing new races of plants. Such is the case also with admixture of marl, of shell sand, and of lime; they slightly consolidate the sand, and open the clays, and thus improve the mechanical texture of both kinds of soil; but their main operation is chemical, and the almost universal benefit they produce depends mainly

upon the new elements they introduce into the soil. It is a subject of general remark that in our climate soils are fertile—clayey or loamy soils, that is—only when they contain an appreciable quantity of lime. In whatever way it acts, therefore, the mixing of lime with a soil in which little or none exists, is one of the surest practical methods of bringing it nearer in composition to those soils from which the largest return of vegetable produce is usually obtained. Clayey soils are also much improved by burning. Charred matters of any kind, such as charred peat, tan, &c., are valuable improvers of the soil when mixed with it. Decayed vegetable matters are amongst the best improvers of the soil. They are generally supposed to serve two purposes when added to the soil: they loosen the land, opens its pores, and make it lighter; and they also supply organic food to the roots of the growing plant. They also serve a third purpose; they yield to the roots those saline substances and earthy matter which it is their duty to find in the soil, and which exist in decaying plants in a state more peculiarly fitted to enter readily into the circulating system of new races. The decay of vegetable substances beneath the surface of the earth fertilises the soil, which nourishes the growth of other plants and other vegetables; and these, in their turn, form the nutriment of animals; and these, again, in their turn, become the food of other vegetables. Thus there is a perpetual change from death to life, and as constant a succession in the forms and places which the particles of matter assume. Nothing is lost, and not a particle of matter is struck out of existence, although it may disappear from our immediate observation. Under certain circumstances the particles of matter may be collected into a body without a change of form. When bodies suffer decomposition their elementary particles are never destroyed or lost, but only enter into new arrangements or combinations with other bodies. When a piece of wood is heated in a closed vessel, such as a retort, we obtain water, an acid, several kinds of gas, and there remains a black porous substance called charcoal. The wood is thus decomposed or destroyed, and its particles take a new arrangement, and assume new forms, but that nothing is lost is proved from the fact that if the water, acid, gases, and charcoal be collected and weighed, they will be found exactly as heavy as the wood was before distillation. In the same manner the substance of the coal burnt in our fires is not annihilated: it is only dispersed in the form of smoke, or particles of culm, gas, and ashes, or dust. Bones, flesh, or any animal substance, may in the same manner be made to assume new forms without losing a particle of matter they originally contained. These are all matters that demand the attention and consideration of every gardener. There should be no waste of anything that comes out of gardens; the pruning of trees should be charred and restored to the soil. It is vain to expect vegetables of first-rate quality unless the land is in the highest state of fertility, and this is maintained by continually restoring to it not only those matters of which it is most wanting, but every substance which will in any way improve its physical and chemical condition.

M. S.

HORTICULTURAL SOCIETY.

Nov. 25.—J. J. Blandy, Esq., in the chair. The exhibition at Regent-street on this occasion was a most interesting one, not only on account of the excellence and variety of the productions brought forward, but as showing a revival of the Society in its best form—that of teaching practical horticulture through the medium of exhibitions, which we have all along maintained is one great means of testing the merits of cultivation and of cultivators. Nor was the competition confined entirely to the productions of British gardeners, foreign fruit being admitted to competition. Of the various subjects produced, we may notice the Muscat and Hamburgh Grapes of Mr. Hill, gardener to R. Sneyde, Esq., Keele Hall, Staffordshire, beyond which cultivation could not be carried much further. The Hamburgh and Muscat and Cannon Hall Grapes of Mr. Jones Nash, of Bishop's Stortford, which considering the immense crops his Vines carry, were also admirable productions. There was also a splendid smooth Cayenne Pine from Mr. Thomas Frost, of Preston Hall, and three finely swelled Jamaica Pines, from Dowlais; there were likewise other fine specimens of good Pine growing in the rooms. Of the exhibition of hardy fruit, there was a splendid collection of Pears from Mr. Snow, of Wrest Park, consisting of Ne Plus Meuris, Beurré Rance, Passe Colmar, Vicar of Winkfield, Old Colmar, Beurré Diel, large and fine; Marie Louise, Chaumontel, Glou Morceau, Winter Nelis, Easter Beurré, and the Forelle or Trout Pear. These were awarded a first prize. Mr. Ingram also had very good fruit. Next came collections from Mr. Tillyard, gardener to the Right Honourable the Speaker, and others. Of Apples, Mr. Snow had the best grown specimens we have seen this season; they were large, handsome, and evenly matched, and were universally admired. In Mr. Ingram's collection we noticed a rather new variety, Cox's Seedling, very handsome, and apparently a good keeper. Of collections of fruit by far the best came from Mr. Tillyard, who furnished four very nice Pine-apples, American Cranberries, Black and Dutch Hamburgh Grapes, Red Currants, Oranges, Rivers's Double-bearing Raspberry, Winter Nelis, and various other Pears. Mr. Ingram also sent a collection in which there was a handsome Cayenne Pine-apple. Mr. Robinson, gardener to Lord Boston, sent some nicely fruited Otaheite Oranges in pots.

Of plants, though not specially invited, there were some interesting exhibitions, especially of Chrysanthemums. Mr. Glendinning also had a very pretty hardy Tussilago with large deep green leaves, prettily covered with yellow and cream-coloured spots; for rockwork and places of that kind this new Japan plant will be a real acquisition. A shoot loaded with flowers of that most lovely of all greenhouse climbers, the Lapageria rosea, was shown by Mr. Veitch. This was stated to require a well drained loose porous soil and plenty of water while growing, and to keep well in rooms in a cut state. Messrs. E. G. Henderson had some handsome hybrid Bouvardias and other plants, among which was the graceful Liparis longipes. Calanthe vestita was shown fine by Mr. Woolly. Messrs. Maule, of Bristol, sent a magnificent cut branch loaded with flowers, of the blue Vanda, than which nothing at this

season could possibly be handsomer. Spikes of Pampas Grass were furnished by the Society, together with other things, among which was the new fruit-bearing shrub, Eugenia Ugni, of which a woodcut illustration will be found in our present volume.

Mr. Rivers produced examples of pyramidal Pear-trees, to show that when budded low on the Quince, under certain circumstances, the Pear will push roots of its own into the ground, and sometimes eventually kill the stock. This, however, is a very rare occurrence; in the instance in question the tree had become cankered, while others, to the amount of some 2000, of the same kind and in the same soil, but which had not behaved in the same way, were perfectly sound. It was thus inferred that the tendency of the Quince to root near the surface had the effect of keeping them sound, and in order to increase their surface fibres biennial transplanting when young was recommended. A young tree full of fibrous roots was shown in illustration of this.

In vegetable produce the Dioscorea or Chinese Yam was largely exhibited, and commented on by the Vice-Secretary. The merits of this new esculent were some time since brought under the notice of our readers, and we are glad to see our predictions so far verified. That it will make a useful addition to our list of vegetables we doubt not; but that it will ever compete with the Potato, or with our more common roots, we cannot admit.

No fewer than thirty-seven new members were elected at this meeting.

LANDSCAPE GARDENING.—No. VI.

THE annexed plan is introduced as an example of what all arrangements should be—expressly designed for and fitted to the positions in which they are placed. It is always an important point that the principles of a new arrangement should, as far as possible, be reconciled with, and in many cases derived from, existing facts; and many of the happiest effects result from carefully seizing such as are convenient and consistent with good taste.

When the garden of which the accompanying plan now forms a part came first under my notice, the terrace wall with its piers, on the right-hand side, was already built in masonry; but it was cut off from the house at one end by the gravel-walk sloping gradually down from the centre line, instead of descending by steps as shown; and the walk at the other end was similarly arranged. The high level walk at the left hand existed, with a rolling bank between it and the level terrace. A serious mal-arrangement also existed, in the terrace wall and the old wall on left hand being both out of parallel with a right line from the house; the former of the two very much so.

The first suggestion was to make the rolling bank into a regular inclined plane, forming a bold grass slope, with its base line so arranged as to make the level plane at foot so nearly symmetrical as would make it appear precisely so from the house. Vases were of course placed upon the piers in wall, and to correspond therewith pedestals

surmounted by vases were placed upon the turf, at foot of slope, on the other side. A line from the centre of doorway at right angles with the house formed the working centre of the design, and gave the position in this direction, for the points marked on the plan by the numbers 4, and 13; similar lines from the centres of windows gave the positions in the same direction for the point marked 3. By subdividing the distances between the vases, the transverse position was obtained for these points, as also for those marked 1 and 2; the longitudinal position of which governed, and was governed by, the boundary lines of the beds on either side. The rest of the arrangement worked out naturally from these points, and is so obvious on the plan, as to require no further explanation. I would draw attention however to one important matter which should be regarded in all similar cases; namely, the avoidance of sharp narrow points to the beds. This is often disregarded in designs which look very well on paper, but sorely perplex gardeners in the subsequent planting and keeping; in that it is practically impossible to make the plants fill the beds, in such intricate recesses, so as to produce that fulness and compactness which constitutes, next to good arrangement of colour and habit, the most important feature in this kind of gardening.

The shrubs recommended for the leading points were as follow:—

1. Irish Juniper.	3. Golden Yew.
2. Irish Yew.	4. Golden Arbor-vitæ.

Nos. 1, 3, and 4 are amongst the kinds of plants best adapted, but little known, and seldom used for such purposes; they are however very ornamental in appearance, and symmetrical in habit.

The seat in the centre of distant boundary, with its accompanying vases standing against the shrubs, formed a natural and appropriate finish to that end of the parterre.

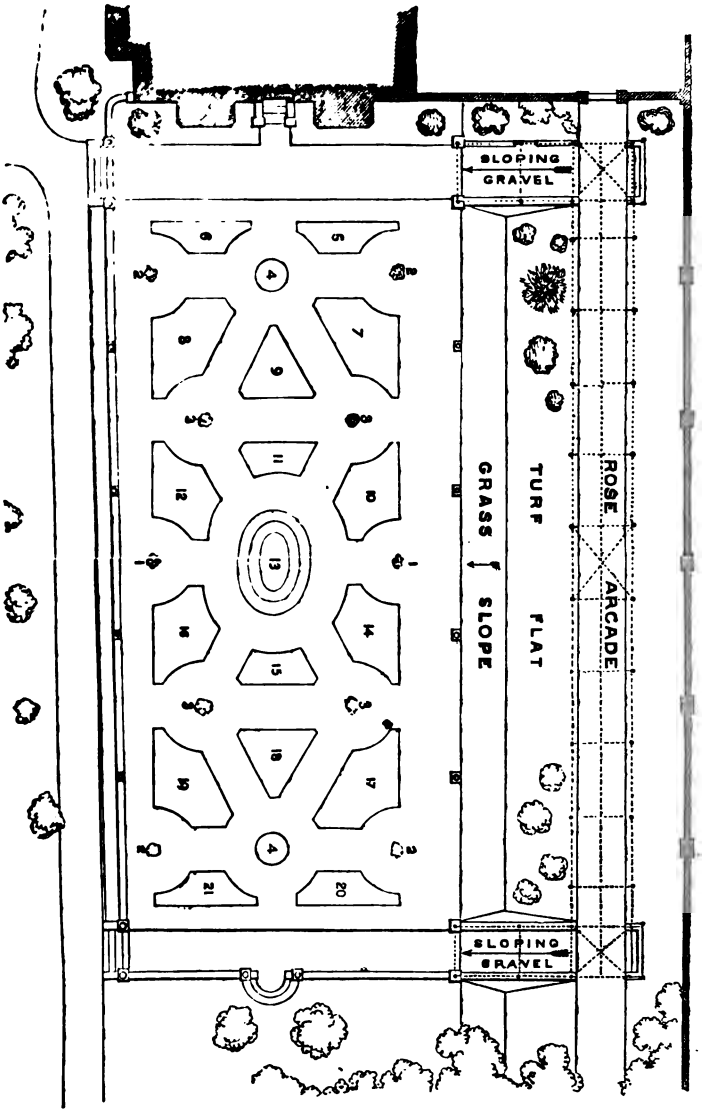
For the rest of the plan, the old wall on the left hand was pronounced a good place for ornamental plants requiring such support; and over the walk was suggested a light Rose arcade, to give somewhat of shade to it, relieve the unbroken surface of wall, and create a position near the house for these deservedly favourite plants.

The border between the wall and arcade was to be devoted to that class of plants usually denominated herbaceous. In too many cases these have been banished from the parterre, where their irregular habits of growth and seasons of flowering render them unsuitable; but they include many very beautiful, though old fashioned flowers, and a convenient place should be allotted to them in every garden. The introduction of piers at intervals, as shown, is an improvement often advised in old walls, and one which may be made at a trifling expense.

Irish Ivy was proposed as an edging to this border; this is easily kept in order by occasional pruning, and is much more ornamental for a bold margin than Box, which in such cases looks rather kitchen-garden like.

The manner in which the sloping gravel connections are managed between the arcade walk and the terrace on lower level, is often useful when stone steps are inadvisable, as was the case in this instance, where it was important that a Bath chair should be able to traverse

without interruption from the door in the front to other parts of the grounds.



Special attention was also given to a suitable arrangement for filling the beds; in summer, with annuals and half hardy plants; in winter, with dwarf shrubs; and in spring with bulbs: these are given, as they may afford some useful hints to thers. The winter and spring

furnishing of such gardens is a subject which has not generally the attention it deserves; as they are usually allowed to remain in dreary barrenness from October to May; although with a little labour and expense they might be made to wear a cheerful, interesting, and even gay appearance, when it would be more contributive to the beauty and enjoyableness of the garden, than even in summer when life and luxuriance are everywhere. The bulbs in such cases are planted about four inches from the edges of the beds, and four inches deep; the summer occupants are planted or sown without disturbing the former.

The shrubs should be dwarf bushes from six to fifteen inches in height; these are arranged in the beds as soon as the summer flowers are over, and removed to a reserve garden in May.

The plan is drawn to a scale of 32 feet to an inch.

		Summer.	Winter and Spring.
4		Round Shrub. Fuchsia globosa.	Erica carnea herbacea.
5	Margin.	White variegated Alyssum (or Alyssum sown in April)	Snowdrop, double.
	Centre.	Blue Lobelia	Ledum buxifolium.
6	Margin.	Venus' Looking-glass (sown in April)	Yellow Winter Aconite.
	Centre.	Dwarf yellow Calceolaria	Pernettya mucronata.
7	Margin.	Collinsia grandiflora (sown in April)	Yellow Crocus.
	Centre.	Heliotrope	Rhododendron ponticum.
8	Margin.	Lilac Virginian Stock (sown in April)	Striped Crocus.
	Centre.	Scarlet Verbena	Variegated Box.
9	Margin.	Brown Calceolaria, dwarf	Blue Hyacinths.
	Centre.	Yellow Calceolaria	Ilex scottica.
10	Margin.	Eschscholtzia (sown in April)	Purple Crocus.
	Centre.	Purple Senecio	Aucuba japonica.
11	Margin.	Pink Saponaria	Pale Red Hyacinth.
	Centre.	Pink Verbena (planted amongst Eucharidium sown in April)	Laurustinus.
12	Margin.	White Virginian Stock (sown in April)	White Crocus.
	Centre.	Salvia patens, blue	Berberis aquifolium.
13	Margin.	Mignonette (sown in April)	Van Thol & other Tulips.
	Centre.	Scarlet Geraniums (in three varieties, the outer row on each tier being planted on their sides to keep them dwarfer)	Rhododendron ferrugineum.
14	Margin.	White Virginian Stock	White Crocus.
	Centre.	Blue Larkspur (raised from seed, transplanted and pegged down)	Berberis aquifolium.
15	Margin.	Silene pendula	Red Hyacinths.
	Centre.	Pink Verbena (planted amongst Eucharidium)	Laurustinus.
16	Margin.	Eschscholtzia	Purple Crocus.
	Centre.	Purple Verbena	Aucuba japonica.
17	Margin.	Lilac Virginian Stock	Striped Crocus.
	Centre.	Scarlet Verbena	Variegated Box.
18	Margin.	Brown Marigold (raised from seed and transplanted)	White Hyacinths.
	Centre.	Tagetes signata, or Coreopsis Drummondii (raised from seed and transplanted)	Saw-leaved green Holly.
19	Margin.	Collinsia quadricolor	Yellow Crocus.
	Centre.	Ageratum	Rhododendron ponticum.
20	Margin.	Venus's Looking-glass	Winter Aconite.
	Centre.	Œnothera macrocarpa	Cotoneaster microphylla.
21	Margin.	White variegated Alyssum	Double Snowdrop.
	Centre.	Blue Lobelia	Berberis Darwinii.

William Davidson.

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CALENDAR FOR THE MONTH.

Azaleas.—A few of the earlier sorts should be put into heat; when in bloom, they are beautiful objects for the conservatory at any season, but more particularly during the winter months. Those intended to flower late should be carefully attended to with regard to watering, ventilating, and heat. They should be kept safe from frost, without too much fire heat.

Camellias.—These will now be rapidly advancing into bloom; they should have a little air on fine days, but guard against cold currents of wind. They should be well watered when they require it. Keep the house moderately warm, but do not overdo it with artificial heat.

Carnations and Picotees.—The foliage of these plants should be kept dry; neither from rain nor watering should the plants receive it overhead, and but sparingly at root. At this season a general cleaning is required, trimming off all dead foliage. Expose the plants on every occasion that the weather is fine, by pulling the lights off.

Cinerarias.—If not already done, give those for early bloom a final re-potting. If large dwarf specimens are required, the plants must have plenty of room, elevated near the glass. The foliage should be opened by pegging down the large outer leaves close to the rim of the pot. This admits light and air to all parts of the plant, giving strength to the shoots, and ultimately size and brilliancy to the flowers.

Cold Frames.—Guard against everything likely to encourage damp. Give air whenever the state of the weather permits. Water only when absolutely necessary, and then in the forenoon. Cover up well at night, to guard against frost.

Conservatory and Show-house.—Every care should be taken to make these as attractive as possible at this season; taste in the arrangement will do much to accomplish this. Chrysanthemums will be at their best the early part of the month; remove any that are going out of flower. Epacrises, Heaths, Camellias, Begonias, Cinerarias, Primulas, &c., will do much to make a good display; add to these a few plants remarkable for fine foliage, and there will be no difficulty in making them gay. The early-started Tulips, Roman Narcissus, and Hyacinths will also assist to make them lively. Keep everything clean and orderly. Give air freely on all favourable occasions, but guard against cold draughts. A little fire in the day occasionally will be necessary to dry the house; a little will also be required at night in frosty weather, but as little as possible should be used at this season. Water any plants that require it; it should be done in the morning, so that everything may get dry towards night.

Cucumbers.—There will be no scarcity of Cucumbers now, if our previous directions have been attended to. If you wish your plants to continue bearing until Midsummer, do not let them carry too many fruit at one time, especially at this season; nothing would be more fatal to their well-being than over-bearing in the absence of bright solar light. Keep a night temperature of about 65°, and from 70° to 80° during the day. Be careful they have a regular bottom heat.

Flower Garden.—Attend to the protection of bulbs, sheltering them from heavy drenching rains as well as frost. Protect tender Roses. Continue alterations in favourable weather. Prune and dig everything requiring it. Sweep and roll lawns and walks when necessary.

Forcing Hardy Shrubs.—Introduce a second batch of Lilacs, Roses, Azaleas, Kalmias, Rhodoras, Rhododendrons, Deutzia, &c., to succeed the first lot. Plunge them in a nice bottom heat and keep the atmosphere moist. A night temperature of from 50° to 55°, and a day temperature of from 60° to 65°, will be sufficient at this season.

Forcing Ground.—Seakale, Rhubarb, and Asparagus are easily forced when they have a nice regular bottom heat. Asparagus requires abundance of light when the heads get above the soil; Seakale and Rhubarb are best forced in darkness. Whatever plan of forcing is adopted, take care to keep a regular succession of them. Sow Mustard and Cress weekly.

Fruit (hardy).—Continue the planting of trees in favourable weather. Be careful in planting not to plant the roots too deep. Make new plantations of Currants, Gooseberries, and Raspberries, if required. In favourable weather proceed with the pruning and nailing of wall trees. Look over orchard trees, and cut out any branches that cross each other; scrape the moss off the stem. When large branches are removed, the wound should be dressed with a little white-lead to keep out wet. Push forward as much as possible all operations in this department. It is a great advantage in having it all done before long severe frosts set in.

Greenhouse (hard-wooded).—Give air on all occasions when the weather will admit, always avoiding cold currents. Water very carefully. Apply fires just sufficiently to allay damp and to keep out the frost. Look over the plants occasionally and turn them. *Soft-wooded.*—Attend to previous directions.

Hollyhocks.—These should be kept growing if the plants are late struck and weakly. Strong plants should have plenty of pot room, and be grown quite hardy.

Kitchen Garden.—Push forward alterations and heavy work of all descriptions. Dig, or trench and ridge, all vacant ground. In frosty weather wheel manure on all places where it is required, and put up some in heaps where it is likely to be wanted when the adjoining grounds become vacant. All old hotbed linings should be cleared out in frosty, dry weather. Protect Parsley, Lettuce, Endive, and Cauliflowers. Earth up Celery when dry. Sow a few Early Horn Carrot and short-topped Radish on a warm south border. Sow some early Peas and Beans, if not already done, and look out for mice. Finish dressing Asparagus beds, if not already done.

Pansies.—Little will have to be done but keeping those in pots clean.

Peach-forcing.—The first house should be got ready immediately. Before the trees are tied they should be carefully washed with the following mixture:—A little soft soap, sulphur, clay, and tobacco-water, reduced with water to about the consistency of paint: this is to be applied with a brush, merely to open the surface; they should then

have a good soaking of liquid manure. The outside borders should have a good covering. If the weather be mild, fires will not be required for a few days. The night temperature for the first three or four weeks should not exceed 40°; the trees should be syringed two or three times a day, and a moist atmosphere should be maintained.

Pelargoniums.—(See paper in last number, page 347.) Tie out the shoots of such plants as are intended to form specimens.

Pinery.—The principal stock should now be kept rather dry at root. A steady bottom heat and a moderate temperature are indispensable at this season. Plants now showing fruit, and plants intended to be started soon, should have a higher temperature, and when dry they should have water—tepid, of course. In very frosty weather cover pits at night; this will obviate the necessity of using too much fire heat.

Pleasure Grounds.—Continue alterations in favourable weather. Plant trees of every description; we removed several very large Hollies the third week in December, 1855, during most severe frosts. We removed them with immense balls of earth, which was completely frozen; and the trees having to be carried a distance of nearly a mile we found it a great advantage, as two horses easily drew, when everything was hard frozen, what four horses could not draw when the frost was out of the ground. Every one of these trees look as well, and have made as good growth, as if they had not been moved. Protect tender trees and shrubs. Roll and sweep lawns when necessary.

Stove.—Give air freely on all favourable occasions, and keep the temperature from 50° to 65° fire heat. Water when required. Look out for insects.

Strawberry-forcing.—If these have been ridged as directed last month, the roots will be perfectly safe; but, in order to keep the frost from the crowns, we recommend some hurdles or pea-rods to be placed in front of them, but at a little distance off, and in very severe weather some straw or litter should be thrown over them. The first batch of plants should now be got in; they should have a gentle bottom heat, and but very little top heat; they should have plenty of light and air when the weather permits. The Black Prince for a very early sort; but, take it all in all, we have no better Strawberry *yet* than Keens' Seedling.

Vinery.—As the young shoots in the early house advance in growth gradually raise the temperature, so that by the time the bunches are beginning to open their bloom the night temperature should be about 65°. Look well to the coverings on the outside border. Keep a nice growing atmosphere.

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